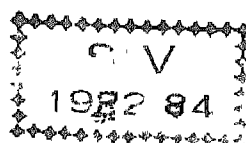


NATIONAL COUNCIL  
OF  
EDUCATIONAL RESEARCH AND TRAINING PROJECT  
for further expansion and testing of the cognate method  
of teaching Dravidian languages

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DEPARTMENT OF LINGUISTICS, UNIVERSITY OF KERALA, KARIYAVATTOM  
TRIVANDRUM



P H O N O L O G Y      O F      T E L U G U  
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ANDHRA BHUUMI

( 22 - 6 - 1973 )

DEENAMMA .



# PART - I



## I N T R O D U C T I O N

This section, Phonology of Telugu is the first part of the Grammar of Telugu, based on one day's news paper<sup>1</sup>.

This phonemic analysis includes the phonemic inventory. In it a description of the Telugu speech sounds is given. Allophonic distribution given in the section is tentative (from the recorded speech of a native speaker). The phonemes posited are 38 in number including 5 vowels and 33 consonant. Minimal and subminimal pairs are given to illustrate phonemic contrast. The distribution of the phonemes (Phonotactics) and the cluster patterns are also analysed. An experimental study of the cluster patterns found in 500 words selected at random is done separately. Much concentration is given to the medial clusters.

The word final consonant cluster (even 30 clusters) are of English loans.

e.g.: /aarts/	-	'arts'
/sartings/	-	'shirtings'

A few charts are available to illustrate the distribution of vowels and consonants and of cluster patterns separately.

Analysis of the Syllabic structure of Telugu is also given in the end, due to borrowing the Structure of the syllable also changes for instance, two and 3 consonant form the coda of the syllable.

It is found that Disyllabic and trisyllabic words are more frequent than monosyllabic words in Telugu.

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1) Andhra bhuumi - 22--6--1973, Vijavada.





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# I. A. GRAPHENICS

## GRAPHIC UNITS

There are 48 graphic units found in the News paper dialect of Telugu Language. 12 for vowels and 36 for Consonants.

They are :-

i,	ii,	u,	uu
e,	ee	o,	oo
	a	aa	
ai,	au		

and,

p, ph, b, bh, t, th, d, dh, ṭ, ṭh, ḍ, ḍh, c, ch, j, jh, k, kh, ṡ, ṡḥ  
g, gh

m	n	ṇ	ñ	ṅ
	ṁ	ṁ	ṁ	
	l	ḷ		
	r			



# DELIMITING THE GRAPHIC UNITS

Of 12 vowels the long vowels and the diphthongs are taken as clusters of identical and non-identical vowels. This will give five writing units - phoneme

i	u
e	o
a	

The nasal  $\bar{n}$  and  $\bar{u}$  are taken as allophone of one phoneme. /  $\bar{o}$  /

There is a diagraph ( k  $\bar{s}$  ) which has to be treated as a cluster of / k / and  $\bar{s}$

Fricatives are phonemic though, ~~there are~~ a few minimal pairs are available. r and R ~~is~~ is taken as allophones of one single phoneme.

After the delenitisation the phenemes posited are 38 in Number. 5 vowels and 33 Consonants.

p, ph, b, bh, t, th, d, dh,  $\bar{t}$ ,  $\bar{th}$ ,  $\bar{d}$ ,  $\bar{dh}$ , c, ch, j, jh, k, kh, g, gh.

n	n	$\bar{n}$		
(f)	s	$\bar{s}$	$\bar{g}$	h
	l	$\bar{l}$		
	r			
v			y	

/ f / is represented by / ph /



# P H O N O L O G Y

A sketch of the Telugu phonology is presented here and it is based on the news paper language.

The distribution of vowels and consonants are given :

[The present work is liable for further modification.]

I. A. GRAPHICS : - to be typed.

I. B. PHONEMIC INVENTORY : -

Vowels : 5 : / i. e. a. o. u. /

Consonants : 33. / k, kh, g, gh\*, c, ch, j, jh\*, t, th, d, dh, n, ṭ, ṭh, ḍ, ḍh, ṇ, p, ph, b, bh, m, y, r, l, ḷ, v, ʃ, ʃh, h, f/

\* are not found in the corpus :

length is phonemic

Phoneme / ai / / au / are taken as clusters of two vowels.

## A NOTE ON THE PHONEMICS OF TELUGU

Telugu has 5 vowel phonemes. They are / i e a u o / Length is phonemic in Telugu. All vowels ( short and long ) can occur in the initial position.

The vowels / i e a u / can occur in all the 3 positions, where as the vowel / o / has limited distribution in the final position.

The front vowel / i, e / have an onglide of / y / and the back vowel / o, u / have an anglide of / u / in word - initial position.

Eg: ilaa - /yilaa/ - in this manner, / akaṭi - wokaṭi / 'one'  
/elaanti/ - yelaanti . ' in what manner'





## C O N S O N A N T S

10 aspirated

Consonants in Telugu include ten un aspirated stops, 5 fricatives 3 nasals ( 1 flap ) two laterals and two semi vowels.

The ten stops are / k c t t p g j d d h / all these stops have their aspirated counter parts.

Of the 5 fricatives / f / is a borrowed sound from English it occurs in all positions.

/ f / occurs initially and medially final occurrence of these phonemes are seen only in Loan words.

Eg: / advaans / 'advance'

/ naagees / 'personal name'

The 3 nasals are / m n ŋ / m has an allophone, bilabial continuant [w] in inter vocalic position. / n / occurs only in medial position.

Of the two laterals / l / occurs initially medially and finally (in loan words) / ɭ / occurs only in the medial position.

Eg: / riigal / 'regal' / skuul / 'school'

The semi vowels / v / & / y / occurs initially medially and rarely in final position.

### NOTE ABOUT f

The fricative / f / is represented by / ph / in Telugu, as there is no corresponding orthographic representation for this phoneme.

Eg: Phalitham - 'Result'  
/ aaphiisar / - 'officer'  
/ aaph / - 'of'



	Bilabial	Labiodental	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal
Stops	p b		t d		ṭ ḍ	c j	k ɣ	
	ph bʰ	th dʰ			tḥ ḍʰ	ch jh	kh ɣh	
Fricatives	(f)			s		ʃ̣ ʂ̣		h
Nasals	m			n				
Laterals				l				
Trill				r				
Semi vowels		v				y		



# VOWELS

## DESCRIPTION

	Front	Central	Back
High	i		u
mid	e		o
low		a	

allophonic discription of vowels

/ i /     [ i \_ ]

## DESCRIPTION OF THE SPEECH SOUND

### VOWELS

/ i /     Short high front unrounded vowel occurs initially  
medially and finally

eg.	Initial	Medial	Finally
	/ippuḍu/ 'now'	/caritram/ 'history'	/padi/ 'ten'
	/idderu/ 'two'	/kilo/ 'kīg'	/paḍḍi/ 'sing'
		'people'	
	/itanu/ 'this man'		
	/ivvaali/ 'should give'		

/ ii /     Long high front unrounded vowel occurs initially, medially  
and finally.

Initially	Medially	Final
/iḡil/ 'film'	/ciiru/ 'to tear'	/annii/ 'all'
(theater)		

/ e /     Short higher mid front vowel occurs initially medially  
and finally.

Initial	Medial	final
/eppuḍu/ 'when'	/ceppu/ 'to tell'	/samme/ - 'strike'
/ela/ 'in what manner'	/pedda/ 'big'	
	/petta/ 'box'	



/ ee / long higher mid front vowel

It occurs in two positions. initially, and medially, rarely in final position.

initial

medial

/ eerpaadu / 'arrangement' / vreelu / - 'finger'

/ eekiibhaavam / 'unity' / reepu / - 'tomorrow'

/ u / short high back rounded vowel occurs initially medially and finally.

initial

medial

final

/ udyoogam / - 'job' / perugu / - 'curd' / uppu / - 'salt'

/uttama / - 'high' / reepu / - 'tomorrow'

/ ukku / - 'steel' / leedu / - 'no / not'

/ uu / long high back rounded vowel

occurs initially and medial position

initial

medial

final

/ uuha / 'gues' / ruupa / 'rupees'

/ duuram / 'distance'

/ ruupam / 'shape'

/ o / Short mid back rounded vowel occurs initial, medial, and rarely in final position (in Loans) position.

Initial

medial

final

/ okati / - one / poddunna / - morning / kilo / - k:g.

(when it occurs initially it has an onglide (v))

/ oo / long mid back rounded vowel occurs initially and medially.

Initial

medial

/ oomprakaas / - 'personal name' / koopam / - 'anger'

/ paapam / - 'sin'

/ a / Short lower - mid back unrounded vowel

occurs in all the 3 position.

Initial

medial

final

/ atanu / - 'he'

/ salaha / (leave) / pillu / - 'girl' (Child)

/ akkada / - 'there'

/ kalavu / / kavita / - propername

/ annadu / - 'then'

/ annadu / - 'then'





/ aa / low central unrounded long vowel. It occurs initially and medially.

initial		medial	
/aagu/	- 'stop'	/paalu/	- 'milk'
/aayana/	- 'he'	/paapam/	- 'sin'
/aamoodam/	- 'happy'	/caala/	- 'many'

The occurrence of long vowels in the final position is only in loan words.

eg. / oo /      / niiroo /      - 'personal name'

#### FINAL POSITION

In Telugu the phonemes / o / and / e / normally will not occur in the final position of words.

But rare occurrence of these phonemes in the final position is found due to loan words from English and other languages.

eg. / kilo / 'kilo'      / samme / - 'strike'

#### FINAL POSITION

/ kala /      Personal name  
/ kuuda /      'also'  
/ kooti /      'erore'  
/ kuudu /

/ leedu /      'no, not'  
/ leevu /      'no, not'  
/ leeni /      if it is not available

#### CONTRAST

##### INITIAL POSITION

	i	e	a	o	u
l		x	x	x	x
e	x		x	x	x
a	x	x		x	x
o	x	x	x		x



/ i /	/ ieaou /	/ikkada /	'here'
		/ekkada /	'where'
		/akkada /	'there'
		/ukku /	'steel'
		/okkaru /	'one man'
		/okkarukkaru /	'each one'
/ e /	/ iaou /	/enta /	'how much'
		/inta /	'this much'
		/anta /	'that much'
		/undi /	'there is'
		/untu /	'to be'
		/onti /	'one'
/ a /	/ aieou /	/appudu /	'then'
		/ippudu /	'now'
		/eppudu /	'when'
		/oppu /	'to agree'
		/ukku /	'steel'
/ o /	/*i,e,au /	/okkappudu /	'at one time'
		/ikkada /	'here'
		/ekkada /	'where'
		/akkada /	'there'
		/ukku /	'steal'

C O N T R A S T

MEDICAL POSITION

	i	e	a	o	u
i		x	x	x	x
e	x		x	x	x
a	x	x		x	x
o	x	x	x		
u	x	x	x	x	



/ i /	/ eaou /	/ cikku /	'confusion'
		/ cakkani /	'beautiful'
		/ ceppu /	'to tell'
		/ cokka /	'shirt'
/ e /	/ iaou /	/ ku /	
		/ nela /	'floor'
		/ nilipi /	'having stopped'
		/ nalgand /	'place name'
		/ nundi /	'from'
/ a /	/ ieou /	/ /	
		/ sabha /	'assembly'
		/ sibbandi /	'labourers'
/ u /	/ ieau /	/ subham /	'auspicious'
		/ gurinacu /	'abak'
		/ giri jan /	'giri jan'
/ u /	/ oiea /	/ gunṭuur /	'place name'
		/ ponda /	'obtained'
		/ cinta paṇḍu /	'tamarind'
		/ cendina /	'that which belongs'
		/ paṇḍu /	'fruit'

CONTRAST OF SHORT VOWEL IN THE FINAL POSITION

i	I	e	a	o	u
i		x	x	x	x
e	x		x	x	x
a	x	x		x	x
o	x	x	x		x
u	x	x	x	x	



<u>Long vowels</u>	<u>Contrast</u>	<u>Medial</u>
<u>Contrast</u>		
/ aa /	/ ii /	/ uu /
		/daani/ 'of that'
		/diini/ 'of this'
		/duura/ 'of distance'
/ aa /	/ uu /	/ oo /
		/paad/ 'having observed' <sup>Sung</sup>
		/kuuda/ 'also'
		/kooti/ crore
/ ii /	/ uu /	/ oo /
		/riigal/ 'regal'
		/ruupam/ 'shape'
		/rooju/ 'day'
/ ee /	/ uu /	/ oo /
		/reepu/ 'tomorrow'
		/ruupam/ 'shape'
		/roodu/ 'road'
/ uu /	/ ii /	/ ee /
		/cuudu/ 'look'
		/ceesu/ 'to do'
		/ciiru/ 'to tear'
/ aa /	/ ii /	/ uu /
		/ oo /
		/ ee /
		/caala/ 'many'
		/ciiru/ 'to tear'
		/cuudu/ 'to look'
		/cootu/ 'place'
		/ceebtu/ 'to look'
-uu-	/kuuda/	'also'
-aa-	/kaadu/	'not' /reepu/ 'tomorrow'
-oo-	/kooti/	'crore' /rooju/ 'day'
		/roodu/ 'road'
-ee-	/keesu/	'case' /raajyam/ 'nation'
	/leedu/	'not' /riigal/ 'theater'
-ii-	/liina/	'personal name' /ruupam/ 'shape'
-aa-	/laagu/	-aa- /daari/ 'way'
-oo-	/aloocana/	'decision' -aa- /daari/ 'way'
		-uu- /duura/ 'distance'





/ aa /	/ jati /	'caste'	-cc-	/deeṣa/	'country'
/ oo /	/ jooti /	'personal name'	-ii-	/ḍiini/	'of this'
/ uu /	/ juun /	'june'			
/ -ee- /	/ jeetaṃ /				
/ -ii- /	/ jiita /	'salaries'			

### CONSONANTS

The consonants can be classified according to the following chart on the basis of the quality of sounds and the points of articulation.

	Bilabial	dental	Alveolar	retroflex	palatal	velar	glotta
Stops	p b	t d	ṭ ḍ	c	j k	g	
	ph bh	th dh	ṭh ḍh	ch	jh kh	gh	
Nasals	m		n	ṇ			
Fricatives	(f)	s		ṣ			h
Laterals			l	ḷ			
Flap			r				
(Trill)							
Semivowels		v			y		

=====



# DESCRIPTION OF CONSONANTS

/ k /      voiceless      velar      plosive

It occurs initially, medially and finally in loan words.

Eg.              initially                                      medially

/kadha/	'story'	/eekiibhaavam/	'wheel' unitly'
/kaalam/	'time'	/naakku/	'for me'

In medial position it can occur either in gemination or in clusters.

/ <del>akk</del> ada /	'there'	/cakram /	'wheel'
/ ukku /	'steel'	/ <del>muk</del> hya/	'important'

Initial clusters are also noted, but these words are generally Sanskrit and English in origin.

/ kriminal /	'criminal'	/ klab /	'Club'
/klišṭaṅga/	'difficulty'	/	

/ g /      voiced velar      stop

It occurs in initial and medial position.

/ gata /		/nagaram/	'country'
/gavarnar/	'governor'	/perugu/	'to-increase'
/gadapu/	'belly'	/digu/	'to decent'

medially it occurs in gemination and in clusters

eg. /daggara/	'near'	/aagro/	'Agro'
/vargam/	'group' 'race'		

Initial clusters are also noted but these words ~~again~~ <sup>are</sup> due to Sanskrit and English borrowings

/ graham /	'planet'
/ greeyes /	'nobility'

/ C / This is a voiceless palatal stop.

/ cilaka /	'bird'	/chinna/	'small'
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It occurs in initial and medial position.

initial		medial	
/ ceppu/	'to tell'	/acaaram/	'tradition'
/cakkani/	'beautiful'	/vaccu/	'to come'



It occurs in the final position

/ frauñc / 'French'

It occurs medially in gemination and frequently as a second member in clusters

eg. /pacca/ 'green' /carca/ 'discussion'  
/añcanaala/ 'estimation'  
/neercu/ 'to learn' /aañcaryam/ 'surprise'

/ j / It is a voiced palatal stop.

/ jana / 'people'

/ jilla / 'district'

/ juun / 'June'

It occurs in initial and medial positions and rarely in the final position.

/ jala / 'of water' / yuvajana / 'youth'

/ / /jarugu/ 'happen' /yajamaana/ 'master'

Finally - / nataraaj / 'personal name'

It occurs medially in gemination and frequently as a <sup>first</sup> second member in the cluster :

/ / /hajjii/ 'a dish' /varjyam/ '  
/vijñāanam/ 'knowledge'

### INITIAL CLUSTERS

/ jyooti / 'proper name'

/ ṭ / It is a voiceless retroflex stop.

/ aṭu / 'that side'

/kooṭi / 'eere' 'crore'

It occurs initially and finally in Telugu but in borrowed items from English and other languages. Medially it occurs in native vocabulary.



/ṭaaṅk/ 'tank'  
/ṭaakiṅ/ 'talkies'

Medially

/paṭa/ 'song'  
/kootla/ 'of a crore'

Finally

/praiveṭ/ 'private'  
/ḍipaartment/ 'department'

In medial position it occurs in gemination and in clusters.

eg. /aṭṭu/ 'that side'  
/peṭṭu/ 'put'  
/kaṭṭu/ 'to tie'  
/kootlu/ 'coats'  
/kaṇṭu/ 'having seen'

Final Clusters.

/proojakt/ 'project'

/ ḍ / It is a voiced retroflex stop.

The initial occurrence of this sound is limited.

It also occurs medially and rarely in the final position

eg. / development / 'development'  
/ḍaakṭar/ 'doctor'  
/ḍeeri/ 'diary'  
/ḍepaartment/ 'department'

In medial position it occurs in gemination and in clusters.

eg. /reddi/ 'a caste'  
/aardṭar/ 'order'

Final /rood/ 'road.'

/ ṇ / voiced retroflex nasal.  
/anu/ 'atom'





It never occurs in initial position. Its distribution is limited to the medial position <sup>also</sup> where it can occur <sup>and</sup> either in gemination ~~or~~ in clusters.

<u>medial</u>		<u>clusters</u>	
/gunam/	'quality'	/anna/	'personal name'
/anu/	'atom'	/patnam/	'town'
		/antu/	'while telling'

/ t / It is a voiceless dental stop.

/tala/ 'head'

/paata/ 'old'

It occurs initially and medially.

/taapu/ 'blow'

/tala/ 'head'

/tarvaata/ 'after words'

medially it occurs in gemination and in clusters.

/kotta/ 'new'

/caritram/ 'history'

/ d / voiced dental stop.

eg. /kaadu/ 'not'

/labbu/ 'money'

It occurs initially and medially and finally in loan words.

Initially

Medially

/deesam/ 'country' /gada/ 'a weapon'

/duuram/ 'far' /aadaayam/ 'profit'

/durga/ 'a deity'

finally

/islaamabaad/ 'place name'

medially it occurs in gemination and clusters

/raddu/ 'cancel'

/pedda/ 'bag'

/vidya/ 'education'

/iddaru/ 'two people'



/ n /      voiced dental nasal consonant. It occurs initially medially and finally (in loan words)

/nilavu/	'moon light'
/nela/	'floor'
/pani/	'work'
/nagaram/	'city'
/kanu/	'to show'

finally

/kanyuunikēṣam/	'communication'
/ṣpekyuleṣam/	'speculation'

In medial position it occurs in gemination and in cluster

/cinna/	'small'	/prayatnam/	'effort'
		/anyaayam/	'injustice'

/ p /      voiceless bilabial stop.

/paalu/	'milk'
/koopam/	'anger'

It occurs initially medially and rarely in the final position.

/paapam/	'sin'	/reepu/	'tomorrow'
/pilu/	'to call'	/ruupam/	'shape'
		/cuupu/	'to show'

finally

eg.      /diliip/      'personal name'

It occurs medially in gemination and as a frequent member in clusters. Initial clusters are also quite frequent.

eg.	/prayaanam/	'journey'	/appudu/	'then'
	/prayatnam/	'effort'	/ippudu/	'now'
			/oppu/	'to agree'

/ b /      voiced bilabial stop

/balam/	'strength'
---------	------------



It occurs initially and medially

<u>Initial</u>		<u>Medial</u>	
*/butta/	'basket'	/jeebu/	'pokket'
/bendu/	'relation'	/	

It occurs medially in gemination and in clusters.

eg. / sibbandi / 'employee' 'flower' 'fokkewer'

Initial clusters are possible only in case of, Sanskrit borrowings.

finally in loan words.

eg. /dabbu/ 'money /brahataramaina/ 'that which is extend  
/javaab/ 'answer.

/ m / voiced bilabial nasal consonant

/maata/ 'word'

/miiru/ 'you'

It occurs in all the 3 positions i.e., initially medially and finally in

<u>initially</u>		<u>medially</u>		<u>finally</u>
/mallii/	'again'	/ tama /	'you'	/koopam/ 'anger'
/muudu/	'three'			/paapam/ 'sin'

It occurs medially in gemination and clusters: Initial clusters with / r/ are possible only in case of skt borrowing

eg. / mrugam / 'animal'  
/ amma / 'mother'  
/ nammakam / 'belief'  
/ samme / 'strike'

/ y / Palatal voiced semivowel.

It occurs initially medially in Telugu. initially it occurs as a glide of / e /, /i/

eg. / ilaa/ 'in this way' , ,  
/ yilaa/ 'in this way'



It occurs medially in geminated<sup>ion</sup> and in clusters.

/ carya /	'action'
/ ceyyi /	'hand'
/ bhaarya /	'wife'
/kaaryakaramam/	'programmes'

/ r / It is known as alveolar ~~trill~~ flap

It occurs initially and medially.

/reepu/	'tomorrow'
/rooju/	'day'
/perugu/	'curds'
/raajya/	'country'
/karuvu/	'famine'

It occurs medially in clusters

/karma/	'fate'
/nirṇayam/	'decision'

finally it occurs in loan words and personal names.

/kummar/	Personal Name.
/kaar/	'car'

/ l / Alveolar voiced lateral

It occurs initially and medially and rarely<sup>n</sup> finally position

/leekha/	'if not <sup>h</sup> having'
/kala/	'dream'
/leavu/	'no'
/leeru/	'no, not'
/pilu/	'to call'

finally in Loan words.

/riigal/	'regal'
/skuul/	'school'

It occurs medially in clusters and in gemination.

/pilla/	'boy'
/kalpana/	'order'

, , , , ,





/ ɭ / voiced retroflex lateral.

It does not occur in the initial position; it occurs only in the medial position, singly or in gemination.

/tooll̥a/	'big'
/kill̥u/	'to pluck'
/ill̥u/	'house'
/vell̥up	'to go'

Initially in cluster.

/kliṣṭaṅgal/	'with difficulty'
--------------	-------------------

/ v / labio dental voiced semivowel.

It occurs initially, medially and rarely in the final position.

/vaccu/	'to come'
/avaṣara/	'chance'
/vala/	'net'
/vəla/	'price'

finally as in

/ deev /	'Name'
----------	--------

medially it occurs in clusters and in gemination.

/ivvaali/	'should give
-----------	--------------

initially

/vyakti/	'individual'
/vyatireekam/	

/ ʃ /

alveo-palatal fricative

/ʃaakha/	'dept'
/ʃakti/	'strength'

It occurs initially medially and finally

initially

Medially

/ʃukravaaram/	'friday'	/deeṣa/	'country'
/ʃakti/	'strength'	/aaṣa/	'greedy' (desire)



final

/ pradeeṣ / 'region'

It occurs in initial clusters of Sanskrit borrowings and medially in gemination.

/ṣrii/ 'Mr.'  
/ṣreena/ 'line'  
/ṣtri/ 'women'

/ ṣ /

Retroflex voiceless fricative.

Initial occurrence of / ṣ / is less frequent in the language. It is possible with borrowed vocabulary.

/ ṣart̥ing / 'shirting'

It occurs in clusters in medial position geminates of this sound are less frequent.

/varṣam/ 'rain'  
/iṣṭam/ 'likeness'

/ ṣ /

It is defined as dental voiceless fricative

It occurs in the initial and medial position in

Telugu Initial.

medial

/ṣanmaanam/ 'reception' /pasuppu/ 'tamaric'  
/ṣabha/ 'meeting'

/ ṣ /

It occurs in clusters initially and medially. It occurs medially in gemination.

eg.

/ceeṣṭuu/ 'while doing'  
/aṣṣam/ 'place-name'  
/aṣṣcaryam/ 'exclamation' (surprise)

/l/

It is known as glottal fricative

It occurs initially and medially in Telugu

/lakku/ 'lights.'  
/haami/ 'difficulties'  
/hed/ 'head'

frequently it occurs in clusters with / y / as a second member. All the clusters are found in Sanskrit borrowings



/madyahnən/                      'mid day'

/simham/ 'Lion'

Aspirated sounds are only found in Sanskrit borrowing

./ kh / It is known as voiceless velar aspirated stop

It occurs initially and medially.

Initially

Medially

/kharcu/ 'expense' /ʒukha/ 'safety/comfort'

/khamdi ʔu/

/ gh /      Voiced velar aspirated stop.

It occurs initially and medially.

/ghanta/      'bell'              /meegham/      'cloud'

/ghooʒə/ 'SROUTING'

/ ch /      voiceless palatal aspirated stop; It occurs initially and medially.

final occurrence of / ch / is seen only in rare cases.

/svich/                      'switch'

/phrɛ̃̃c/                      'French'

/jh/      voiced palatal aspirated stop

The occurrence of / jh / is very much restricted

/jhamjiir/ 'film'

/maj.jhaannam/      'afternoon'

/ th /      voiceless retroflex aspirate stop. It occurs initially medially, initially the frequency is very much less.

/ dh /      voiced retroflex aspirated stop.

This sound is less frequent in Telugu. It occurs initially and medially.

/adhiṣṭānam/      'basis'

/ th /      voiceless dental aspirated stop.

/thiyeetar/                    'theater'

/arthiñcu/                    'requested'

/ dh /      voiced dental aspirated stop.

/aḥhamam/                      'low'

/kadha/                      'story'



It occurs initially and medially in clusters

/aandhra/                      'Andhrapredeṣ'

/addhyayana/                    'learning'

/adhyakṣa/                      'President'

/ph/      voiceless bilabial aspirated stop.

/ phalitam / 'result'

It is pronounced as / f / in modern Telugu.

/aapphiis /                      'Office'

/ /<sup>a</sup>vi<sup>h</sup>phaliyam/

finally / aaph / 'of'

/ bh /    voiced bilabial aspirated stop.

It occurs initially and medially.

/bhuumi/                      'land'

/laabham/                      'profit'

/bhaarya/                      'wife'

/labhistayyi/      'They will get'

/bhaaratat/                      'Bharatha' ( 'India' )

It occurs medially in clusters with / r /

/subhramanyam/      'Personal Name.'





## Allophonic Distribution

### Vowels:

- /i/ [ĩ] lower high front un rounded vowel occurs in the medial position, when the next syllable contains /a/.  
[Pĩl:a] - Child (small girl)  
[yi] front un rounded vowel with onglide of (y) occurs initially.  
[yila:] - 'in this manner'  
[i] high front un rounded vowel occurs else where  
[pilu\_] - 'to call'  
[E] low high mid un rounded vowel occurs medially, when followed by /a/ in the next syllable  
[PEd:a] - 'big'  
[ye] mid front un rounded vowel with onglide of (y) occurs initially.  
[yela:] - 'in what manner'  
[e] high mid front un rounded vowel occurs else where.  
[perugu] - 'to increase'  
/a/ [A] central mean mid un rounded front vowel occurs medially when the next syllable contain /a/  
[tAɭa] - 'head'  
[ʌ] low central un rounded vowel occurs in the final position.  
[tʌɭa] - 'head'  
[a] low un rounded front vowel occurs else where  
[amalu] - 'implimentation'  
[o] lower mid back rounded vowel occurs medially when the next syllable contains /a/  
[\*kOm:a] - 'branch'  
[kʊ:pam] - 'anger'



[w<sup>o</sup>] mid back rounded vowel with onglide of w occurs initially

[wokaṭi] - 'one'

[o] central mean mid rounded vowel occurs else where

[roḥu] - 'day'

[U] lower high back rounded vowel occurs medially when followed by a in the next syllable.

/u/

[sU:cAna] - 'direction'

[u] high back rounded vowel occurs else where.

[ukku] - 'steel'

### Consonants:

/p/ [p] voiceless labial unaspirated stop. Occurs initially medially and finally in loan words.

[pa:lu] - 'milk'

[kO:pam] - 'angry'

[dilip] - 'personal name'

/p<sup>h</sup>/ voiceless labial aspirated stop occurs initially medially, and rarely in the final position

[phalltam] - 'result'

[a:phl:saru] - 'officer'

[ā:p<sup>h</sup>] - 'of'

occurs

[b] voiced labial fricativized stop inter vocally

/b/

[ba:bu] - 'Personal name'

[b] voiced labial stop. Occurs initially and finally in loan words.

[bAlam] - 'strength'

[jAva:b] - 'answer'

[b<sup>h</sup>] voiced labial aspirated stop. Slightly fricativized. Occurs inter vocally

/b<sup>h</sup>/

[lA;bha] - 'benefit'

[b<sup>h</sup>] voiced bilabial aspirated stop occurs initially

[bhu:mi] - 'earth'

[bhA:rAtam] - 'bharatam'



/t/ [t] voiceless unaspirated dental stop. Occurs initially, medially and finally in loan word

[tAl^] - 'head'

[tarvA:ta] - 'after words'

[bhA:rat] - 'a/name'

/th/ [th] voiceless dental aspirated stop. Occurs initially and medially

[thiyE:tAr] - 'theatre'

[sthiti] - 'position'

/d/ [d] voiced dental unaspirated stop. Slightly fricativized occurs intervocally.

[d] voiced dental un aspirated stop. Occurs initially and finally

[dab:u] - 'money'

[dE:sam] - 'country'

[islA:mAba:d] - 'place name'

/dh/ [dh] voiced dental aspirated stop occurs initially and medially

[dhil:i] - 'del'hi'

[adh1kA:ra] - 'power'

[adh1kA] - 'more'

/ṭ/ [ṭ] voiceless retroflex stop occurs initially medially and finally in loan words.

[aṭu] - 'that side'

[ta:ṅk] - 'tank'

[praivṛt] - (praivate'

/ṭh/ [ṭh] voiceless retroflex aspirated stop

/ḍ/ [ḍ] voiced retroflex stop occurs initially medially and rarely in final position.



[d̪A:k̪tar]	-	'doctor'
[de:ri]	-	'diary'
[a:dl̪ta:r̪lyam]	-	'auditoriyam'
[limited]	-	'limited'

/dh/ [dh]voiced retroflex aspirated stop occurs  
initially and medially

[dhil:i]	-	'delhi'
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/c/ [ts]voiceless palatal affricate. Occurs initially  
medially when followed by front and central  
vowels.

[tsl:ru]	-	'to tear'
[tsAk:ani]	- 8	'which is good'
[t̪se:l:i]	-	'sister'

[C] voiceless palatal stop occurs elsewhere

[c̪k:ʌ]	-	'shirt'
[co:tu]	-	'place'
[preñc]	-	'french'

[dz] voiced palatal affricate, occurs initially  
medially, when followed by front and central  
vowels.

[dzl:ʌ]	-	'district'
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[j]voiced palatal stop, occurs else where

[jAna]	-	'people'
[jAlʌ]	-	'water'
[Ra:j]	-	Personal name

/ch/ [ch]voiceless aspirated palatal c' stop occurs  
initially and medially

/jh/ [j<sup>h</sup>]voiced palatal aspirated stop, occurs  
initially and medially

[jhamji:r]	-	'film'
[majjh:n: m]	-	'afternoon'





/k/    /k/    voiceless un aspirated velar stop occurs  
initially medially and finally

[kAdhʌ]    -    'story'  
[ē:kAta]    -    'unity'  
[pa:k]    -    'pakistan'

/g/    [g]    voiced velar stop fricativized occur inter  
vocalically

[nAgAram]    -    'country'

[g]    voiced velar stop occurs initially, medially  
and finally

[gAdapu]    -    'belly'  
[vArgam]    -    'group'  
[guna]    -    'quality'

/kh/    [kh]    voiceless aspirated velar stop occurs  
initially and medially

[kharcu]    -    'expense'  
[mukhyʌ]    -    'important'

/gh/    [gh]    is avoiced aspirated velar stop occurs  
initially, and medially

[ghAntʌ]    -    'bell'  
[mE:ghʌm]    -    'cloud'

#### sals:

/m/    [v]    labio dental open nasal occurring finally  
and inter vocalically

[kθ:pʌv]    -    'anger'  
/ʌmalu/    -    'implimentation'

[m]    labio dental nasal occurs elsewhere.

/mʌtʌ/    -    'word'  
/miiru/    -    '8you'

//n/    /n/    velar nasal occurs before stops  
/aŋgʌ/    -    'part'



- [ɲ̐] palatal nasal occur before palatal stop  
 /aɲ̐jʌli/ -  
 /ʌncʌnʌ:lu/ - 'estimations'
- [ɳ̐] dental alveolar nasal occurs elsewhere.  
 [ɳ̐elʌ] - 'flood'  
 [ɳ̐ʌgʌrʌm/ - 'city'  
 /kʌmyu:nike:ʃʌn/ - 'Communication'
- [ŋ̐] voiced retroflex nasal stop. It never occurs initially, occurs medially and finally in very limited instances.  
 /ʌŋ̐u/ - 'atom'  
 [gʌŋ̐ʌm] - 'quality'

#### Fricatives:

- /s/ [s̐] dental voiceless fricative. It occurs in the initial medial and final position.  
 [s̐ʌbhʌ] - 'assembly'  
 [pʌs̐u:p] - 'tamaric'  
 [ʌd̐vʌ:n̐s̐] - 'advance'
- /ʃ/ [ʃ̐] alveo-palatal fricative occurs initially medially and finally  
 [s̐ʌk̐hʌ] - 'branch'  
 [s̐ʌk̐ti] - 'strength'  
 [ʌ:s̐ʌ] - 'desire'  
 [p̐rʌd̐c̐:s̐̐] - 'region'
- /ʂ/ [ʂ̐] retroflex voiceless fricative, occurs initially medially and finally  
 [ʂ̐ʌʈ̐iŋq̐] - 'shirting'  
 [iʂ̐t̐ʌm] - 'likeness'  
 [nʌ:ge:s̐̐] - 'nagesh'
- /h/ [h̐] glottal fricative occurs initially and medially  
 [h̐ʌk̐:u] - 'rights'  
 [h̐ed̐] - 'head'



—

Laterals:

/l/    [ɫ]    voiced alveolar laterals, occurs initially  
             medially and rarely in final position.

/kAla/ - 'dreams'

/ne:vu/ - 'no' / not

/sku:l/ - 'school'

/l/    /l/    voiced retroflex lateral never occurs initially  
occurs only in the medial position

[il:u] - 'house'

/vel:u/ - 'to go'

Flap:

/r/    [r]    alveolar flap occurs, initially medially  
and finally

[re:pu] - 'tomorrow'

/karuvu/ - 'famine'

/kuma:r/ - 'personal name'

/ka:r/                      -                      'car'

### Semi-vowels:

/y/    [y]    palatal voiced semivowel, occurs initially  
and medially

/yuvajanA/ - 'youth'

/carya/ - 'action'

/v/ [w] bilabial semivowel, occurs before the back vowels

[v̥] voiced labio dental semivowel occurs elsewhere

/vac:u/ - 'came'

/avasara/ - 'chance'

```
/de:v/      -      'name'
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/f/    [f̥] is a labio dental voiceless fricative occurs  
initially medially and finally (it is a  
borrowed phoneme) (represented by -ph)

[fo:n]       -       'phone'

[chi:f]       -       'chief'

[a:fi:sər]   -       'officer'

....





# C O N S O N A N T S

## MINIMAL AND SUBMINIMAL PAIRS

Contrasting pairs once given for one phoneme are not repeated.

/ k /    / kh, g, c, j, ṭ, ḍ, ṇ, t, n, p, ph, b, m, y, r, l, v, ḷ,  
          ṛ, ṛ̣, s, h /

/ kh /	/leekha/	' letter'	/leeka/	' not having'
/ ḡ /	/kuripiṅcu/	' arranged'	/guriṅci/	'about'
/ c /	/kaalam/	'time'	/caala/	'many'
/ j /	/kaaru/	'car'	/jaari/	'erect'
/ ṭ /	/kaaka <sup>u</sup> /	'to protect'	/taakiis/	'talkies'
/ n /	/kaaku/	'to protect'	/naaku/	'for me'
/ t /	/kala/	'art'	/tala/	'head'
/ p ḡ /	/kaalam/	'time'	/paalaṣ/	Palace
/ ph /	/pha <sup>a</sup> ṛṣṭ/	'forest'	/kaaru/	'Car'
/ b /	/kaalam/	'time'	/baala/	'child'
/ bh /	/kaarya/	'action'	/bhaarya/	'wife'
/ n /	/kaaku/	'to protect'	/naaku/	'for us'
/ y /	/prakatana/	'exhibition'	/prayatnam/	'effort'
/ r /	/raaka/	'not come'	/kaaka/	'protect'
/ l /	/kaaka <sup>n</sup> /	'to protect'	/kaalam/	'time'
/v/	/keesu/	'case'	/veeti/	'having'
/ ḷ /	/illu/	'house'	/ikkada/	'here'
/ ṛ /	/kaantaraavu/	'P N'	/ṛaanti/	'PN'
/ ṛ̣ /	/vark/	'work'	/varṣam/	'rain'
/ s /	/kalavu/	'famine'	/salaha/	'leave'
/ h /	/kaani/	'but'	/haani/	'disturbance.'



/ g /

/ t /      /giri jan/      'giri jan'      /tiri/      'to turn'

/ n /      /jagat/      'world'      /jana/      'of people'

/ p /      /gerilla/      'geurilla'      /perugu/      'to increase'

/ m /      /maulika/      'fundamental'      /gauhaati/      'place name'

/ y /      /jaga/      'world'      /java/      personal name

/ r /      /jaga/      'world'      /jarugu/      'happen'

/ l /      /gauhaati/      place name      /laud snikar/      'loudspeaker'

/ v /      /jagat/      'world'      /javahar/      personal name

/ s /

/ s /      /goora/saastri/      'PN'      /goo-room/      'show room'

/ s /      /gauhaati/      'PN'      /saukariyam/      'convenience'

/ h /      /giri jan/      'giri jan'      /harijan/      'harijan'

/ c /      / [k] j, t, th, d, dh, n, t, th, n, p, ph, b, bh, m,

y, r, l, v, s, sh, h /

/ j /      /ceeta/      'band'      /jeeta/      'band'

/ t /      /pacca/      'green'      /patt/      'catch'

/ th /      /thiyeetar/      'theatre'

/ d /      /denmark/      'place name'      /Cendina/      'that which belongs'

/ dh /      /dhilli/      'delhi'      /Cellinci/      'having paid'

/ n /      /pracarana/      'propaganda'      /prasaalika/      'plan'

/ t /      /tala/      'read'      /Calana- /      'moving'

/ d /      /caaritra/      'historical'      /daari/      'way'

/ dh /      /samaacaaram/      'news'      /samaadhaanam/      'peace'

/ n /      /ciiru/      'to hear'      /niiru/      'water'

/ p /      /caala/      'many'      /paalas/      'palace'

/ b /      /caala/      'many'      /baala/      'child'

/ bh /      /bhaavata/      'bharatam'      /Caaritra- /      'historical'

/ m /      /ciiru/      'to tear'      /miiru/      'yam (pl)'

/ y /      /ciluka/      'bird'      /yila/      'in this manner'

/ r /      /ruupu/      'to see'      /ruupam/      'shape'



l /	/liina/	personal name	/ciiru/	'to tear'
v /	/pracaraṇa/	'propaganda'	/pravarana/	'noble'
'ś /	/cakani/	'beautiful'	/śakti/	'strength'
'ṣ /	/carca/	'discussion'	/ṣarting/	'shirting'
'ṇ /	/praacāṇa/	'exhibition'	/prasaad/	personal name
'h /	/hakku/	'rights'	/cakkani/	'beautiful'
'j /	/jala/	'male'	/calana/	'moving'
'ḍ /	/rooḍu/	'day'	/rooḍu/	'road'
/n /	/jilla/	'district'	/nila/	'flood'
/b /	/jadji/	'judge'	/badjat/	'budget'
/p /	/jana/	'of the people'	/pani/	'work'
/l /	/jana/	..	/jala/	'water'
/r /	/jana/	. ..	/jarapu/	'to happen'
/y /	/jaanam/	'knowledge'	/yaanam/	'travel'
/d /	/jaari/	'to correct'	/daari /	'way'
/dh /	/jilla/	'district'	/dhilli/	'Delhi'
/ṭ /	/ [ k ], [ c ], j, ṣ, ṇ, t, n, p, ph, b, bh, n, y, r, l, v, ś, ṣ, ṣ, h /			
/j /	/ṭan/	'tan'	/jana/	'of the people'
/t /	/ṭan/	'tan'	/tana/	'of me'
/ṇ /	/nirmaata/	'one who construct'	/nirmaana/	'construction'
/n /	/ṭaakiis/	'talkies'	/naaku/	'for me'
/p /	/ṭair/	'tyre'	/pai/	'on'
/ph /	/ṭair/	'tyre'	/phinansial/	'financial'
/b /	/ṭaank/	'tank'	/byaank/	'bank'
/m /	/mana/	'ours'	/ṭan/	'ton'
/y /	/yaanam/	'travel'	/ṭaank/	'tank'
/r /	/ṭendar/	'tender'	/nenḍu/	'two'
/l /	/lakṣam/	'lack'	/ṭekstails/	'textile'
/v /	/ṭendar/	'tender'	/venda/	'cooking'
/s /	/ṭendar/	'tender'	/ṣentaru/	'centre'



/ ḍ / ÷ /

/ ṭ /	/paadi/	'having song'	/paata/	'song'
/ d /	/āḍitooriyam/	'auditorium'	/aadaayam/	'profit'
/ n /	/delivery/	'delivery'	/nela/	'floor'
/ p /	/cuuḍu/	'to look'	/uupu/	'to show'
/ m /	/paadu/	'to sing'	*/paamu/	'Snake'
/ j /	/roodu/	'road'	/rooju/	'day'
/ ṭ /	/teliyu/	'to know'	/development/	'development'
/ ṇ /	/raavanaa/	'personal name'	/raavaḍam/	'coming'
/ d /	/pranaa <sup>li</sup> ka/	'plan'	/pramaadam/	'gay/wonderful'
/ v /	/nirṇayam/	'discussion'	/nirvahaṇa/	'performance'
/ ṭ / ÷ /k, c, / j, ṭ, ḍ, ṇ, ḍ, n, p, ph, b, bh, m, ɣ, r, l, v, l,				
ṣ, ʃ, ʒ, h /				

/ j /	/tala/	'head'	/jala/	'of water'
/ ṭ /	/tan/	'tun'	/tana/	'of me'
/ ḍ /	/teliya <sup>u</sup> /	'to know'	/development/	'development'
/ n /	/nirmaṇam/	'Construction'	/nirmaata/	'those who construction.'
/ d /	/tala/	'head'	/dala/	'group'
/ n /	/tiiru-maa <sup>n</sup> ṇam/	'decision'	/miiru/	'you'
/ p /	/pala/	'different'	/tala/	'head'
/ p h /	/tala/	'head'	/phalitam/	'result'
/ b /	/tala/	'head'	/bala/	'strength'
<del>/bh/</del>				
/m/	/tana/	'of me'	/mana/	'ours'
/ y /	/teliya <sup>u</sup> /	'to know'	/yelaanti/	in that manner
/ r /	/rakṣaṇa/	'Protection'	/takṣaṇa/	'Carpentry'
/ l /	/teedi/	'date'	/leedu/	'not' it'
/ v /	/tala/	'head'	/vala/	'net'
/ ṣ /	/ṣri/	Mr	/tri-/	three
/ ʃ /	/toolaṇa <sup>cu</sup> ttu/	'to remove'	/ṣoo/	'show'





/ d /	த	/		
/ t /	/tala/	'head'	/dala/	'part'
/ n /	/daari/	'way'	/daani/	'of that'
/ p /	/duuram/	distance	/puurti/	'finish'
/ n /	/duuram/	'distance'	/nuulu/	'bread'
/ y /	/daaham/	'thirst'	/yaanam/	'travel'
/ r /	/leedu/	'not it'	/leeru/	'not they'
/ l /	/diini/	'of this'	/liina/	personal name
/ v /	/daari/	'way'	/vaari/	'of them'
/ ā /	/deevā/	'country'	/deevaalayam/	'church'
/ dh /	/dhaar/	personal name/kaaru/		'car'
/ th /	/ardharaatri/	'midnight'	/arthinai/	'having requested'
/ p /	/dhilli/	'Delhi'	/pilla/	'boy'
/ j /	/dhilli/	'Delhi'	/jilla/	'district'
/ d /	/dhaar/	personal name/paari/		'to run'
/ ph /	/dhaar/	personal name/phaaraala/		'forms'
/ n / $\frac{a}{\bar{a}}$ /k, c, $\frac{t}{\bar{t}}$ , d, $\frac{r}{\bar{r}}$ / $\frac{t}{\bar{t}}$ / d, $\frac{n}{\bar{n}}$ / p, ph, b, bh, $\frac{m}{\bar{m}}$ / y, r, l, v, ā, ṛ, ṣ, h /				
/ t /	/teliyu/	'to know'	/nela/	'floor'
/ d /	/delam/	'branch'	/nela/	'floor'
/ n /	/annai/	'all'	/anna/	'brothers'
/ p /	/nilu/	'to stop'	/pilu/	'to call'
/ ph /	/phiryaadu/	'Complaint'	/nir- /	prefix
/ b /	/birla/	of Birla	/nir- /	prefix
/ bh /	/bhavanam/	'house'	/navambaru/	november
/ y /	/yela/	'in what manner'	/nela/	'floor'
/ r /	/liina/	'P.N.'	/leeru/	'not they'
/ l /	/liina/	personal name/niiru/		'water'
/ v /	/niiru/	'water'	/viiru/	'they'
/ ā /	/saakha/	'branch'	/naaku/	'for me'
/ ṣ /	/naraṣimha/	personal name/ṣarting/		'shirting'



/ ɳ /	/nilipi/	'having stopped'	/ɳilk/	'silk'
/ h /	/kaani/	'but'	/hanna <sup>an</sup> vi/	'disturbance'
/ p / ÷ k, c, t, ṭ, n, ɳ, g, j, d, n, ph, b, ɳ̌, ň, y, r, l, v, ɳ̌, ɳ̌, ɳ̌, ɳ̌, h, / , ,				
/ph /	/paaru/	'to run'	/phaaraalu/	'forms'
/ b /	/paalaɳ/	'palace'	/baala/	'child'
/ j /	/pilla/	'boy'	/jilla/	'district'
/d /	/paaru/	'to run'	/daari/	'way'
/y /	/pilu/	'to call'	/yila/	'in this way'
/ r /	/rooju/	'day'	/peeju/	'page'
/ l /	/paapam/	'sin'	/paalaɳ/	'palace'
/ v /	/ac <sup>p</sup> ca/	'green'	/vaccu/	'came'
/ ɳ̌ /	/ɳa <sup>p</sup> atam/	'percentage'	/paalaɳ/	'palace'
/ ɳ̌ /	/p <sup>p</sup> oon/	'phone'	/ɳoo/	'show'
/ ɳ̌ /	/pilu/	'to call'	/ɳilk/	'silk'
/ h /	/pani/	'work'	/hanimoon/	'film'
/ kh/	/kha <sup>d</sup> id/	'Prisoners'	/pai/	'one'
/ ph /	/paina/	'on'	/phainansiya/	'financial'
/ bh /	/bhaarata/	'of bharata'	/phaara <sup>u</sup> ɳ/	'to run'
/d/	/prabhaat/	'studio'	/pradaani/	'chief'
/ m /	/prabhaat/	' "	/pramaadam/	'gay'
/ kh/	/sukham/	'pleasure'	/sukham/	'auspicious'
/ dh /	/sukham/	'auspicious'	/sukha/	'personal name'
/ m / ÷ k, c, n, t, ɳ̌, g, j, d, n, b, ň, ṭ, p, y, r, l, v, ɳ̌, ɳ̌, h				
/j/	/mana/	'ours'	/jana/	of the people
/ ḍ /	/roo <sup>p</sup> du/	'road'	/rooman/	Roman
/ ň /	/pramaana/	'document'	/pranaalika/	'plan'
/ d /	/migata/	'cobble'	/digu/	to descend
/ p /	/parimiti/	limit	/mari/	'again'
/ y /	/prayaanam/	'travel'	/pramaanam/	'document'



/ r /	/ <sup>meemu</sup> <del>nunpa</del> /	' we /	/reepu/	'tomorrow'
/ l /	/meekaḷa/	' zone	/leeka/	' if not having'
/ v /	/vīru/	' they'	/micru/	' you'
/ ā /	/saa'stra/	' Saṃśa'	/maatraṃ/	' only
/ ṣ /	/ṣoo /	'Show'	/mootar /	' motor
/ a /	/maidhaanam/	'playground'	/śāinyam/	'army'
/ h /	/karijan/	' karijan'	/mari/	' again
/ y /	÷ [k, c, n, t, ṭ, p, ŋ, g, j, d, n, b, r, l, v, ā, ṣ, h			
/ n /	/prayaṇam/	'travel'	/praṇaḷika/	' Plan'
/ g /	/geta/		/yedha/	in that way'
/ j /	/jooti/	'personal name'	/yoogyān/	' noble '
/ d /	/ceeyu/	'to do	/ eedina/	' which ever
/ r /	/niyoogiṇcu/	'appointed'	/niroodiṇcu/	'prohibited'
/ l /	/vreelu/	'finger'	/veeyu/	'to measure'
/ v /	/vela/	'prize'	/yela/	'in what way'
/ ā /	/aaśa/	' desire'	/aayudha/	' weapon'
/ ṣ /	/ṣoo /	' Show	/yooci- /	'to Think'
/ a /	/selavu/	'leave'	/yela/	in what many
/ h /	/kaani/	'disturbāṇa'	/yaanam/	'travel'
/ r /	÷ [k, c, ŋ, ṭ, n, g, j, d, b, [p, m, y ], l, v, ā,			
	ṣ, ṣ, h.			
/ n /	/daari/	'way'	/daani/	'of that'
/ l /	/kaaru/	'car'	/kaalam/	'time'
/ v /	/viilu/	'wheel'	/riigal/	'regal'
/ ā /	/ārii/	'Mr.'	/riigal/	'regeal'
/ ṣ /	/roodu/	'road'	/ṣoo/	'show'
/ a /	/reepu/	'tomorrow'	/seepu/	'time'
/ h /	/haani/	'difficulty'	/raani/	that which didn't come.
/ l /	÷ [k, c, n, ṭ, n, p, m, y, r ], g, j, d, b, bh,			
	v, l, ā, ṣ, ṣ, h.			
/ r /	/lakṣam/	'lack'	/rakṣaṇa/	'protection'



/ r /	/lakṣam/	lack		
/ v /	/kala/	'art'	/kavita/	personal name
/ ā /	/aaśa/	'desire'	/aalocana/	'thought'
/ . /				
/ ɣ /	/ṣaṅkariyam/	'secret'	/laud speaker/	'laud speaker'
/ h /	/aahaaram/	'food'	/aalocana/	'decision'
/ ɛ /	/jaga/	'world'	/Jala/	'water'
/ j /	/vijilans/	'vigilance'	/viluvatu/	'
/ d /	/adaṁṣyam/	'profit'	/aalocana/	'decision'
/ b /	/baala/	'child'	/laabham/	'profit'
/ l /	/malli/	'again'	/mallikaarjuna/	'personal name'

/ v / ÷ / k, c, ʃ, t, n, ʒ, t, n, p, m, y, r, l, g, j, d, n  
b, l, ā, ɣ, ɛ, h.

/ t /	/villu/	'wheel'	/tīicar/	'teacher'
/ n /	/pranāalika/	'plan'	/pravarana/	noble
/ /	/jala/	'of water'	/vela/	'Price'

/ ā / ÷ /

/praṇam/	'problem'	/prayatnam/	'effort'
/ṣaṁṣya/	'problem'	/ṣaamardhyam/	'brilliant'

/ ɣ / ÷ /

/s/	/ṣart/	'shirt'	/ṣarkil/	'circle'
	/ṣoo/	'show'	/ṣooviet/	'soviet'
/ p /	/ṣooroom/	'show room'	/poorchugal/	place name

/ ɛ / ÷ / k, c, t, n, ʒ, t, n, p, m, y, r, l, g, j, ā, ɣ, h.

/ t /	/attu/	'that side'	/Aṣṣam/	place name
/ n /	/prasaad/	personal name	/pranāalika/	'plan'





/ j /	/praja/	'people'	/prasaad/	personal name
/ ā /	/Soo bha/	'light'	/Sooma/	Sun
/ ʒ /	/sooviyet/	'soviet'	/ʒoo/	'show'
/ h /	/Laṛṣam/	'delight'	/Sarkil/	circle
/ g /	/gōovinda/	'p.n'	/Sooviyet/	Soviet
/ j /	/sariga/	'straight'	/jariju/	'to happen'
/ l /	/sikṣana/	learning	/lakṣam/	'lac'
/ y /	/ceeyu/	'to do'	/keesu/	'case'
/ r /	/nivaasi/	'resident'	/nivaariṇeu/	'remedied'
/ h / ॐ [				
/ g /	/harijan/	'harijan'	/giri jan/	'gṛri jan'
/ n /	/haami/	'disterbance'	/kaani/	'but'
/ v /	/harṣam/	'delight'	/varṣam/	'rain'
/ ʒ /	/harṣam/	'delight'	/ʒart/	'shirt'
/ ʒ /	/harṣam/	'delight'	/sarkil/	'circle'
/ dh /	/samaahaaram/	'group'	/samaadhaanam/	'peace'



	pp	bb	tṭ	tt	cc	jj	kk	gg	dḍ	dd	nn	nn	nṇ	hh	yy	rr	ll	lḷ	vv	ss
i	x	x	x	x	x		x			x									x	
e	x		x				x		x		x									
a	x		x̄				x				x	x	x						x	
o	x								x											
u	x			x		x	x													

Distribution of short vowels in the initial  
position before long Consonants



	Distribution			Consonants				Initial occurrence.				
	a	i	u	e	o	aa	ih	uu	ee	oo	au	ai
k	x	x	x	x	x	x	x	x	x	x		
th	x							x				x
g	x	x	x	x		x		x	x	x		
gh												
h												
c	x	x	x	x	x	x		x	x	x		
ch												
j	x	x	x		x	x	x	x	x	x		
jh	x											
t	x	x		x	x	x	x	x				x
th												
d		x		x		x						x
dh		x										
n												
t	x	x	x	x	x	x	x	x	x	x		
th	x	x										
d	x	x	x	x	x	x	x	x	x	x		
dh		(x)				(x)						
n	x	x	x	x		x	x	x	x			x
p	x	x	x	x	x	x	x	x	x	x	x	x
ph	x	x				x		x				
b	x	x		x								
bh	x					x		x				
m	x	x	x	x	x	x	x	x	x	x	x	x
y	x	x	x	x		x	x	x	x	x	x	x
r	x	x	x	x		x	x	x	x	x		x
la	x	x		x		x	x	x	x		x	
va	x	x	x	x		x	x		x		x	
g	x	x	x	x		x			x	x	x	
h	x	x	x	x		x	x	x	x	x	x	x













DISTRIBUTION OF VOWELS

initially                      medially                      & finally

Distribution initially

Short vowels

Before short consonants

/ i /	/iṅkaa/	'this'
	/ikamiidaṭa/	'here'
	/inta/	'this much'
/	/idi/	'this'
	/indukṣu/	'for this'
	/iravai/	'20'
	/ilaanti/	'in this manner'
/ iḷ /	/iḷḷu/	'house'
	/ivii/	'these'
/ e /	/ekaraala/	'across'
	/egudu/	'up'
	/etu/	'where'
	/edaṁ/	'place'
	/etheliṭṭi/	'athlete'
	/enta/	'how much'
	/empṛeer/	'club'
	/eyar/	'air'
/ a /	/aṅḡikaaram/	'acceptance'
(a)	/ajanta/	'place name'
	/ataṭavi/	'forest'
	/ataḍu/	'he'
	/anu/	'atom'
	/ani/	said'
	/adhikaaram/	'power'
	/ahimsa/	'violence'
	/aṅṅook/	'name'



/avaṣaram/	'necessaṣity'
/advakeet/	'advocate'
/adi/	'that'
/adhyakṣṇ/	'President'
/antaa/	'that much'
/apsara/	'name'
/amalu/	'implementation'
/ayitee/	'if'
/arikattāalai/	'should be controlled'
/alaṅkaara/	'beautiful'
/avakaṣam/	'opportunity'
/oka/	'one'
/ontī/	'one'
/upa/	'sub'
/ubhaya/	'both'



DISTRIBUTION OF VOWELS ARE  
SHOWN IN CHARTS

Medial

Distribution of short vowels after short consonants

/ a /	/kadha/	'story'
	/gada/	'weapon'
	/khareu/	'expense'
	/cakku/	'beautiful'
	/janata/	'people'
	/tannula/	'of tongue'
	/ata <u>du</u> /	'he'
	/adu/	'that'
	/adali <u>m</u> apu/	'slackness'
	/padavi/	'position'
	/phalitam/	'result'
	/prabhala/	'strong'
	/amalu/	'complimentation'
	/ <u>vi</u> yamin <u>i</u> cu/	'ordered'
	/nirasa <u>na</u> /	'rejection'
	/nilavu/	'moon'
	/nivas <u>tu</u> /	'while living'
	/da <u>sa</u> /	'state condition'
	/nirva <u>ha</u> <sup>a</sup> <u>m</u> <sup>na</sup> /	'performance'
	/pari <u>ṣ</u> at/	'pari <u>ṣ</u> at'
	/pari <u>ṣ</u> ara <u>p</u>	'neighbouring'
	/raha <u>sya</u> /	'secret'
/ i /	kilo	'k.g.'
	/giri <u>jan</u> /	'girijan'
	/ciku/	'bird'
	/jilla/	'jilla'
	/tiri <u>yu</u> /	'to turn'





	/divi jan/	'division'
	/atidhi/	'guest'
	/adika/	'more'
	/kanipiñcu/	'having seen'
	/pilu/	'to call'
	/birla/	Place name
	/simiti/	'association'
	/ayite/	'if'
	/arikattu/	'to control'
	/initipi/	'having stopped'
	/sicindra/	'place name'
	/silk/	'silk'
	/ahimsa/	'nonviolence'
u /	/kuripiñcu/	'arranged'
	/guriñci/	'about'
	/khareu/	expense
	/juvaan/	personal name
	/durga/	name of a goddess
	/paatutundi/	'she will sing'
	/punyaalanu/	'religious ceremonies'
	/bukking/	'booking'
	/mukhya/	'important'
	/yuvajana/	'youth'
	/ru/	
	/subham/	'auspicious'
	/sugamam/	easy
	/husain/	personal name
' e /	/kenaraa/	'canara'
	/genda/	'hour'
	/ceppu/	'to tell'
	/jebli/	personal name
	/tendaru/	'tendar'
	/despeejai/	'dispatch'



/ /	/teliyu/	'to know'
	/debhu/	'money'
	/nela/	'flood'
	/pettu/	'to fall'
	/bendam/	'relation'
	/mekṣiko/	'personal name'
	/yela/	'in what manner'
	/reṇḍu/	'two'
	/lebiṣṭuu/	'while getting'
	/vela/	'prize'
	/ṣet/	'set'
	/ṣeṭṭil/	'settle'
	/heccariga/	'increasingly'
/ o /	/konni/	'some'
	/cokka/	'shirt'
	/doṅga/	'thief'
	/ponḍa/	'to rise'
	/bombay/	'Bombay'
	/mottam/	'total'
	/yokka/	'one'



DISTRIBUTION OF LONG VOWELS AFTER SHORT  
CONSONANTS

C/VV

/aa/	/kaani/	'but'
	/kaalam/	'time'
	/kaaru/	'car'
	/caala/	'many'
	/ṭaakiṣ/	'talkies'
	/ṭaank/	'tank'
	/jaati/	'caste'
	/naagaarjuna/	'project'
	/paadi/	'having sung'
	/daari/	'way'
	/dhaar/	personal name
	/vaaru/	'He, or they'
	/laadu/	'
	/ṣaakha/	'branch'
	/ṣaasan/	'order'
	/haami/	'disturbance'
/ ii /	/ciiru/	'to tear'
	/kiilak/	'any year'
	/ṭiicar/	'teacher'
	/jiivitam/	'life'
	/niiru/	'water'
	/aiigu/	'
	/riigal/	'regal'
	/liina/	personal name
	/viilu/	'wheel'
	/ṣiitu/	'seat'
	/ṭhiyeetar/	'theatre'
	/nii/	'you'
/ oo /	/kooti/	'crore'



	/cootlu/	'place'
	/goodaavari/	'River'
	/poott/	'post'
	/dooccu/	'to think' 'steal'
	/yoogyanga/	'society'
	/roodu/	'road'
	/soobhaayamaanam/	'enlightened'
	/sooruum/	'show room'
	/sooviyet/	'soviet'
/ uu /	/kuudu/	'to join'
	/cuupu/	'to show'
	/juun/	'june'
	/juulai/	'Julai'
	/nuulu/	'thread'
	/puurti/	'finish'
	/duuram/	'distance'
	/yuuniversity/	'University'
	/ruupam/	'shape'
	/luunar/	personal name
	/suucana/	'direction'
	/muudu/	'three'
/ cc /	/keendram/	'centre'
	/ceestu/	'while doing'
	/jeeta/	'
	/needu/	'day'
	/peeju/	'page'
	/paepar/	'paper'
	/deeṣam/	'country'
	/reepu/	'tomorrow'
	/leevu/	no, not
	/veeṣi/	'measured'
	/ṣeeṣam/	'rest'
	/ṣeepu/	'time'





/thiyēṭar/	'theatre'
/meemu/	'we'

=====

INITIAL DISTRIBUTION OF LONG VOWELS, BEFORE SHORT

CONSONANTS

VV/C

/ aa /	/kaakakunda/	'without'
	/caala/	'many'
	/ṭaank/	'tank'
	/kaani/	'but'
	/kaalam/	'time'
	/kaaruru/	'car'
	/jaati/	'caste'
	/paapam/	'sin'
	/paayanṭuku/	'point'
	/upñyaasīṇcu/	'lectured'
	/prasaaram/	'diffusion'
	/baani/	'troubles'
	/koolaashalan/	'up floor'
	/aakaaṭa/	'sky'
	/nirmaana/	'construction'
	/kaadu/	'no'
/ ii /	/ciiru/	'to tear'
	/ṭiicar/	'teacher'
	/kiilak/	'any year'
	/niiru/	'water'
	/liina/	'personal name'
	/riigal/	'regal'
	/pooliisu/	'police'
	/Amiirpet/	'personal name'
	/jiivitam/	'life'
	/tiirumaanam/	'discision'



	/niiru/	'water'
	/diiga/	'
	/siitu/	'seat'
	/thiyeetar/	'theatre'
/ uu /	/kuudaa/	'also'
	/juun/	'judge'
	/juulai/	'julai'
	/nuulu/	'distance'
	/huustan/	'hustan'
	/muudu/	'three'
	/cuupu/	'to show'
	/tuutooriyal/	'tutorial'
	/nuulu/	'thread'
	/puurti/	'finish'
	/yuuniversity/	'University'
	/ruupam/	'shape'
	/huustan/	'place name'
	/phuul/	'flower'
	/muudu/	'three'
/ oo /	/kooti/	'crore'
	/goodavari/	'river'
	/jooti/	personal name
	/rooju/	'day'
	/roodu/	'road'
	/yoogyanga/	'nobly'
	/sooviet/	'soviet'
	/soosalist/	'socialist'
	/pooliisu/	'police'
	/aastokanagar/	place name
	/aaroopana/	'criticism'
	/aalocana/	'discision'
	/goosamahar/	'name'



/ ee /	/poostu/	'post'
	/moostaar/	'mother'
	/ceeta/	'because of'
	/peepar/	'paper'
	/reepu/	'tomorrow'
	/needu/	'day'
	/leevu/	'no'
	/leeru/	'no, not'
	/leeka/	'if not having'
	/deeta/	'country'
	/veetu/	'finger'
	/teeta/	'rest'
	/praiveet/	'private'
	/keendram/	'centre'
	/teedi/	'date'
	/ceestu/	'while doing'
	/thiyeetar/	'theatre'

final

Distribution of vowels after long consonants C/VV

/ i /	/anni/	'all'
	/petti/	'having kept'
	/kodi/	'little'
/ a /	/ka <sup>c</sup> ka/	'beautiful'
	/cokka/	'shirt'
	/pacca/	'green'
	/cattam/	'law'
	/ceetta/	'because'
	/pedda/	'big'
	/pilla/	'boy'
	/jilla/	'District'
	/calla/	'cold'
	/gerilla/	'geurilla'
	/too <sup>c</sup> lla/	'big'



/ u /	/ukku/	'steel'
	/hakku/	'right'
	/iccu/	'to give'
	/caacu/	'came'
	/dooccu/	' <del>think</del> steel
	/kattu/	'to tie'
	/ettu/	'where'
	/raddu/	'cancel'
	/ṛaddu/	'noise'
	/ṭannu/	'ton'
	/oppu/	'to agree'
	/uppu/	'salt'
	/illu/	'house'
	/vellu/	'to go'
	/ivvu/	'to give'
	/heecu/	'increase'

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DISTRIBUTION OF THE VOWELS IN THE FINAL  
POSITION AFTER SHORT CONSONANTS. C - V.

/ i /	/digi/	'having discented'
	/atavi/	'forest'
	/ati/	'foot'
	/ani/	'having said'
	/eedi/	'which'
	/jaati/	'caste'
	/tupaaki/	'gun'
	/guri/	'about'
	/paadi/	'having sung'
	/kooti/	'crore'
	/poodi/	'                  '
	/kamiti/	'group'
	/haami/	'disturbance'
/ u /	/anu/	'to tell'
	/kadapu/	'belli'
	/atadu/	'he'
	/vaaru/	'they'
	/et <sup>t</sup> u/	'where'
	/kharcu/	'expense'
	/cuudu/	'see'
	/naakku/	'for me'
	/pblu/	'call'
	/perugu/	'to increase'
	/kuudu/	'join'
	/kaaru/	'car'
/ a /	/inka/	'here'
	/akkada/	'there'
	/nela/	'floor'
	/ahimsa/	'non violence'
	/varṣa/	'rain'



	/liina/	'personal name'
	/upa/	'sub'
	/oka/	'one'
	/caala/	'many'
	/ḡikḡana/	'learning'
	/kavita/	'personal name'
	/kuuda/	'also'
	/deeḡa/	'country'
	/varḡaa/	'rain'
	/yuvajana/	'youth'
/ c /	/raake/	'if not (come)'
	/ayite/	'if'
/ o /	/kilo/	'k.g.'

#### Long vowels

/ oo /	/niiroo/	'name'
	/airoo/	'aeroplanes'

#### Long vowel final position

/ i /	/kaaleejii/	'college'
/	/ivii/	'these'
	/ḡrii/	'Mr.'

#### Long vowels finally

/airoo/	'personal name'
/eyiroo/	'aerogroam'
/railvee/	'railway'
/kaaleejii/	'college'
/ivii/	'these'
/kaadaa/	'is not it'

Normally, except /ii/ no other long vowels occur in the final position. The exceptions are due to acceptance of English loan words.



SUMMARY OF THE VOWEL DISTRIBUTION

Initially	Medially	Finally
V - C	C - V	C - V
V - CC	C - C	CC - <del>V</del>
	CC - V	C - VV
VV - C	V - CC	CC - <del>VV</del>
VV - CC	C - VV	
	VV - C	
	CC - VV	
	VV - CC	

DISTRIBUTION OF CONSONANTS

Initially

Medially

Finally

Consonants

C - V  
C - VV

Distribution

Initial

Short

Long

/ k /	/kanuka/	'because'	/kaani/	'but'
	/kilo/	'k.g.'	/kiilak/	'anyear'
	/kuduru/	'	/kuuda/	'also'
	/kenaraa/	'canera'	/keendram/	'centre'
	/konni/	'having bought'	/kooti/	'crore'
/ c /	/cakku/	'beautiful'	/caala/	'many'
	/cikku/	'bird'	/ciiru/	'to tear'
	/ceppu/	'to tell'	/cuudu/	'to look'
	/cokka/	'shirt'	/ceestu/	'while doing'
			/cootlu/	'places'



/ t /	/tair/	'tyre'	/taank/	'tank'
	/tan/	'ton'	/takkis/	'talkies'
	/tek-tails/	'textiles'	/tiicar/	'teacher'
	/tuutooriyal/	'tutorial'		
/ d /	/dipaartment/	'department'	/daaktar/	'doctor'
	/develapment/	'development'	/deeri/	'diary'
/ g /	/gata/	'wagon'	/gaandhi/	'gandhi'
	/gerilla/	'geurilla'	/goodaavari/	'goodaavari'
	/giri jan/	'giri jan'		
	/gujaraat/	'gujarat'	/gaikonnadi/	'
/ j /	/janaral/	'general'		
	/jaati/	'caste'	/t/	
/jilla/		'district'	/tirigi/	'having turned'
	/jiivitam/	'life'	/tiirmanam/	'discision'
	/juun/	'june'	/tupaaki/	'gun'
	/jeeta/	'	/tuurupu/	'cast'
	/jooti/	personal name	/teliyu/	'to know'
			/teelindi/	'
/ t /	/tala/	'head'	/toleegincu/	'
	/tee/	'	/toolaginattu/	'
/ n /	/nagaram/	'country'		
	/naagaarjuna/		'project'	
	/nilipi/		'having stoped'	
	/niiru/		'water'	
	/nela/		'floor'	
	/needu/		'day'	
	/nunai/		'from'	
	/nuulu/		'thread'	
	/nauka/		'ship'	
/ pa /	/padi/		'ten'	
	/paadu/		'to sing'	
	/pilu/		'to call'	
	/punyaalanu/		'Religious rights'	





	/puurti/	'finish'
	/pettu/	'to keep'
	/peeju/	'page'
	/paina/	'on'
	/ponda/	'Kath which has risen'
	/postu/	'post'
	/paurasyam/	'manliness'
/ d /	/daṭa/	'state, condition' direction.
	/daari/	'way'
	/digu/	'to discent'
	/durga/	'diety'
	/duuram/	'distance'
	/debbu/	'money'
	/deeṭa/	'country'
	/doṅga/	'thief'
	/doṇṇu/	'think' to 'steel'
/ dh /	/dharmal/	'Project'
	/dhar/	personal name
	/dhaar/	personal name
	/dhilli/	place name
/ ya /	/yajamaṇalu/	'masters'
	/yajaṇany/	'of masters'
	/yella/	'in this way'
	/yela/	'in what way'
	/yudha/	'war'
	/yuvuniṭṭi/	'University'
	/yoṅga/	'no play'
/ ra /	/rakam/	'variety'
	/raake/	'if not come'
	/rit/	'writ'
	/riigal/	'regal'
	/ruupam/	'shape'



	/reepu/	'tomorrow'
	/rendu/	'two'
	/roodu/	'road'
	/railvee/	'railway'
/ la /	/lakṣam/	'lack'
	/laabham/	'profit'
	/limitṭeḍ/	'limited'
	/liina/	personal name
	/lehiṣṭuu/	'while getting'
	/leka/	'if not having.'
	/laudapiikar/	'laud speaker'
	/vaccu/	'came'
	/vaaru/	'they'
	/viilu/	'wheat'
	/vela/	'price'
	/vaitham <sup>u</sup> /	'white house'
/ ɔ /	/ṛakti/	'strength'
	/ṛaakha/	'branch'
	/ṛicindra/	'place name'
	/ṛubham/	'auspicious'
	/ṛeeṣam/	'rest'
	/ṛoobhaayama <sup>n</sup> am/	'lighted'
/ ɔ /	/ṛarting/	'shorting'
	/ṛarting/	'shorting' /ṣoo/ 'show'
/ ɔ /	/ṛabha/	'assembly'
	/ṛaagar/	'place name'
	/ṛubham/	'auspicious'
	/ṛucana/	'direction'
	/ṛimiti/	'group'
	/ṛiṭṭu/	'seat'
	/ṛentar/	'centre'
	/ṛeeṣu/	'time'
	/ṛait/	'sight'



	/sooviyat/	'soviet'
	/saukariyam/	'chance'
/ h /	/hakku/	'right'
	/haami/	'disturbances'
	/hindu/	'Hindu'
	/hed/	'head'
	/husain/	'place name'
	/huustan/	'hustan'
	/haidrabaad/	'place name'
/ th /	/thiyeetar/	'theatre'
/ kh/	/kharcu/	'expense'
	/khaidi/	'prisoners'
	/khus/	'Hindi word'

DISTRIBUTION OF LONG CONSONANTS BEFORE SHORT VOWELS

/CC /-V

/ pp /	ipp <u>u</u> du/	'now'
	/app <u>u</u> du/	'there'
	/uppu/	'salt'
	/gooppadi/	'greatness'
	/oppu/	'to agree'
	/tappudu/	'wicked'
/ bh /	/ibharu/	'two persons'
	/ibhandam/	'difficultly'
	/sibbandi/	'follower' 'labourers'
/ mm /	/samme/	'strike'
	/khammam/	'
	/nammakam/	'belief'
	/pommandu/	'telling legs'
	/tamma <u>u</u> du/	'
/ kk /	/hakku/	'right'
	/akkada/	'there'



	/ikkada/	'here'
	/ukku/	'steel'
	/ekkada/	'where'
	/cakkani/	'beautiful'
	/cokka/	' <sup>u</sup> shirt'
/ cc /	/pacca/	'green'
	/dooccu/	'to think' 'to steel'
	/iccina/	'that which has given'
	/vaccu/	'came'
	/heccu/	'increase'
/ dd /	/iddaru/	'two people'
	/koddi/	' little '
	/sadhuma <sup>n</sup> ikaaka/	' noise '
	/peddalu/	'big people'
	/reddu/	'cancel '
/ dd /	/eddu/	'personal name'
/ nn /	/annii/	'all'
	/unnadani/	'that which was'
	/tannala/	'of tons'
	/cinna/	'small'
/ tt /	/attu/	'that side'
	/ittu/	'this side'
	/cettu/	' <del>this side</del> ' 'place'
	/pattu/	'to fall'
	/pettu/	'to put'
	*/ceetta/	' '
/ ll /	/pilla/	'boy'
	/yilla/	' '
	/gerilla/	'geurilla'
	/callani/	'beautiful'
/ ll /	/tool <sup>l</sup> la/	'big'
	/illu/	'house'
	/vellu/	'to go'





/ vv /	/ɪvuu/	'to give'
/ ɳɳ /	/aɳɳaam/	'place name'

DISTRIBUTION OF LONG CONSONANTS BEFORE LONG VOWELS

CC-/-VV

/ pp /	/ee <sup>ɳ</sup> ppaaduɳ/	'arrangement'
/ bh /	/subbaaraavu/	'personal name'
/ kk /	/cokka/	'shirt'
/ cc /	/iccaaru/	'they gave'
/ tt /	/itttiivala/	'in this way'
/ nn /	/annaaru/	'they said'
	/konnaaru/	'they bought'
/ ll /	/cellaaraam/	'chellaraam'
/ vv /	/ivvaali/	'should give'

DISTRIBUTION OF SHORT CONSONANTS BEFORE SHORT VOWELS

C/-V

/ k /	/ekkaraala/	'of acres'
	/kanuka/	'because'
	/rakam/	'variety'
/va	/varaku/	'untial'
/ g /	/perugu/	'to increase'
	/pagalu/	'days'
	/digi/	'having descended'
	/digu/	'to descient'
	/nagaram/	'country'
/ c /	/gacarahal/	'
/ t /	/atavi/	'forest'
	/a <sup>(t)</sup> tu/	'that side'
/ d /	/dipaartment/	'department'
	/divijan/	'division'
	/develapment/	'development'
	/aepyuuṭi/	'deputy'



/ d /	/sadaru/	' same as '
	/adi/	'that'
	/padavi/	'position'
	/sadalinpu/	'slackness'
/ n /	/nirvahaṇa/	'performance'
	/nirmaṇam/	'construction'
/ n /	/paṇi/	'work'
	/aṇu/	'atom'
	/kanuka/	'because'
	/kanipiṇicu/	'having seen'
/ p /	/japuli/	'per ' P N'
/ b /	/prabala/	'strong'
	/prabutvam/	'government'
	/cebutuu/	'while seeing'
/ m /	/parimiti/	'limit'
	/amalu/	'implementations.'
	/niyaṁiṇcu/	'ordered'
	/kamal/	'P N'
	/kaṁmiṭṭi/	'commit <del>te</del>
/ ya /	/ayite/	'if'
	/niyaṁiṇcu/	'ordered'
/ r /	/perugu/	'to increase'
	/niraṣaṇa/	'rejection'
	/varaku/	'until'
	/parigaṇaṇa/	'consideration'
/ l /	/pilu/	'to call'
	/nilipi/	'having stoped'
/	/tala/	'head'
	/nela/	'floor'
	/pilu/	'to call'
	/kalar/	'colour'
	/kalugu/	'to join.'
	/vela/	'price'



	/vala/	'net'
/ v /	/selvau/	'sleave'
	/nivasistuu/	'while living'
	/yuvajana/	'youth'
	/navambar/	'November'
/ ā /	/diāa/	'direction'
	/deāa/	'state, Condition'
/ ɐ /	/paɐupu/	'direction'
	/pariɐara/	'neighbouring'
/ ɐ̣ /	/pariɐat/	'pariɐat'

### Medial

#### Distribution of short consonants after short vowels

V-7-C

/ k /	/akaraala/	'of acres'
	/rakam/	'variety'
	/varaku/	'untill'
	/kanuka/	'because'
/ g /	/perugu/	'to increase'
	/diigi/	'                  '
	/digu/	'to descend'
	/nagaram/	'country'
/ c /	/gacarabalu/	'                  '
/ j /	/yajamaana/	'masters'
	/yuvajana/	'youth'
/ ɖ /	/aɖavi/	'forest'
	/aɖu/	'that side'
	/kamiɖi/	'community'
	/adu/	'that'
/ d /	×/ɖadaɖu/	'same as'
	/adi/	'that'
	/eduru/	'opposition'
	/padavi/	'position'



	/śadaliṃpu/	'
/ t /	/kavita/	' P.N. '
	/śatam/	'percentage'
	/śimiti/	'association'
	/kamiṭi/	'committee'
/ n /	/nirvahaṇa/	'performance'
	/pani/	'work'
	/śa <sup>oca</sup> ḷṇa/	'decision'
	/kanuka/	'because'
	/kanipin̄cu/	'to show'
	/janata/	'people'
	/janaral/	'general'
/ p /	/janata/	'people'
	/kaḍapu/	'belly'
/ b /	/prabala/	'important'
	/cebutu/	'seeing'
/m /	/parimiti/	'limit'
	/kamal/	'P.N'
	/niyamiṇcu/	'ordered'
	/śamiti/	'group'
	/amalu/	'implementation'
	/kamiṭi/	'committee'
	/kanyuṇṇikeśaṇ/	'communication'
/ y /	/niyamiṇcu/	'appointed'
	/ayite/	'if'
	/upayoogiṇcu/	'used'
	/nilayam/	'station'
/ r /	/perugu/	'to increase'
	/niraśana/	'rejection'
	/varaku/	'until'
	/parigaṇiṇcu/	'considered.'
	/arikaṭṭu/	'to control'





/ l /	/kalugu/	'join'
	/nilayam/	'station'
	/vela/	'price'
	/vala/	'net'
	/pilu/	'to call'
	/nilipi/	'having stopped'
	/nilavu/	'moonlight'
	/kalar/	'colour'
/ v /	/ṣelavu/	'leave'
	/navambar/	'November'
	/nivaṣistu/	'while living'
	/kavita/	'P.N'
/ ā /	/yuvajana/	'youth'
	/deśa/	'state'
	/diśa/	'direction'
/ ṣ /	/pariṣat/	'pariṣat'
	/paṣupu/	'tameris'
	/ṣariṣara/	'neighbouring'
	/pṛaṣad/	personal name
/ n /	/nirvahanā/	'performance'
	/rahasya/	'secret'
	/ṣalaha/	'leave'
/ bh /	/ṣabha/	'assembly'
	/śubham/	'auspicious'
/ dh /	/śudha/	personal name
	/śudharśan/	personal name

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DISTRIBUTION OF SHORT CONSONANTS AFTER LONG VOWELS

-VVC-

/ k /	/kaakunḍa/	'with out'
	/samiikaaranam/	'equalization'
	/naaku/	'for me'
	/raaka/	'not come'
	/ruka/	'                    '
/ g /	/raagaanee/	'as he come'
	/aiiga/	'                    '
	/naagaarjuna/	'project'
	/gaagar/	'place name'
	/kaagala/	'become'
/ c /	/riigal/	'regal'
	/doocu/	'to <del>think</del> steal'
	/yoociṣṭuu/	'while thinking'
	/suucana/	'direction'
	/ṭiicar/	'teacher'
/ i /	/aaloozana/	'discision'
	/iijiḇḇ/	'egypt'
	/rooju/	'day'
	/raajyam/	'nation'
	/peeju/	'page'
/ t /	/kaaleeji/	'college'
	/yaaajamaana/	'master'
	/haajar/	'attend'
	/kaata/	'play'
	/paataḇ/	'song'
/ ḍ /	/kooti/	'crore'
	/paadu/	'to sing'
	/kuudu/	'to join'
	/needu/	'day'
	/roodu/	'road'
	/aadu/	'to swing'



	/cuudu/	'to see'
/ n /	/ <sup>P</sup> raanaalup/	'life'
/ t /	/saatam/	'percentage'
	/siita/	personal name
/ d /	/padeeppadee/	'again and again'
	/rasiidu/	'receipt'
	/aadaayam/	'profit'
/ n /	/ <sup>j</sup> nuuniyar/	'junior'
	/samaana/	'equal'
	/daani/	'of that'
	/daanam/	' <del>fixtham</del> ' 'arms'
	/diini/	'of these'
/ p /	/kaapaadup/	'protects'
	/paapam/	'sin'
	/ruupam/	'shape'
	/reepu/	'tomorrow'
	/cuupu/	'to see'
	/keepital/	'capital'
/ b /	/jaabita/	'list'
	/praabalyam/	'come in to existence'
/ bh /	/laabham/	'profit'
/ m /	/soomavaaram/	'monday'
/ n /	/pramaana/	'document'
	/nirmaana/	'construction'
	/rooman/	'roman'
	/sumaaru/	'average'
	/eemi/	'what'
/ ya /	/saayaukaalam/	'evening.'
	/aayana/	'he'
	/aayudhaalu/	'weapons'
	/haayagaa/	'comfortly'



/ r /	/neer/	'streight'
	/daari/	'way'
	/duuram/	'distance'
	/paaruØ	'to ran'
	/puuri/	'to finish'
	/kaarur/	'car'
/ l /	/nuulu/	'thread'
	/pooliia/	'police'
	/caala/	'many'
	/kaalam/	'time'
	/kaalaaniki/	'to the time'
/ v /	/diivi/	'of these'
	/deevaalayalam/	'church'
	/poovaaliØ	'should go'
	/jiivitam/	'life'
	/laavooa/	'place name'
	/aanaana/	'order'
	/deesaam/	'country'
	/pariailaka/	'trainee'
	/ceesina/	'that which has done'
	/kaasmiiru/	'place name'
/ s /	/katpiisaluku/	'cut piece'
	/unhaaditvam/	'beyond expectation'
	/aahaarama/	'food'
	/koolaahalam/	'up love'

# DISTRIBUTION OF SHORT CONSONANTS BEFORE LONG VOWELS

CVV

/ g /	/aayamkaalam/	'evening'
	/amiikaaram/	'equalization'
	/naagaarjuna/	'name of a project'
	/raagaanee/	'as he comes'
	/aacaarana/	'custom'





/ c /	/aacaaraṇa/	' custom '
	/aalooṇana/	'decision'
/ j /	/raajiipadi/	' agreement'
	/najiima/	place name
	/hi jaak/	'hi jack'
	/kaaleejii/	'college'
/ t /	/reeteel/	retail
/ d /	/aadiṭooriyam/	'auditorium'
/ d /	/pramaadi/	' a month'
	/aadaayam/	'profit'
/ n /	/nirvahanaski/	'fulfilled'
/ p /	/ ruupaayalu /	'rupees'
/ m /	/hima/	'killing or violence'
	/samaana/	'equal'
	/ameerika/	'America'
	/amiirpet/	place name
	/primiiyar/	'tyre'
	/samaadhaanam/	'peace'
/ y /	/prayaanam/	'travel'
	/prayoojanam/	'usefulness'
	/rayoons/	'rayons'
	/haay/	'comfort'
/ r /	/prasaad/	'personal names'
	/phaaraalu/	'forms'
	/vaaraala/	'weeks'
/ l /	/kaaleejii/	'college'
	/aalooṇana/	'decision'
	/pariṭiilaka/	'trainee'
	/birlaaka/	' of Birla'
	/riliis/	'release'
/ v /	/deevaalayam/	'church'



	/nivaaraṇa/	'solution'
	/poovaali/	'should go'
	/laavooṇ/	'place name'
/ ē /	/deeēaanni/	'to all the countries'
	/aaēaabhaavam/	'desire'
	/praveēa/	'entrance'
/ ē /	/pooliis/	'police'
	/praaad/	'personal name'
/ ē /	/uṣaakhanna/	personal name
	/sooṇyaliṣṭu/	'socialist'
	/aahaaram/	'food'
/ h /	/parihaaram/	'solution'
	/aalhaaṭṭi/	'leave'
	/aahaayaṭṭa/	'helping'
/ dh /	/samaadhaanam/	'peace'

=====



THE PHONEMES OCCURRING IN THE FINAL POSITION ARE 19,

k, c, j, <sup>d</sup>t, d, d, p, ph, <sup>abh</sup>b, n, m, y, r, l, v, ɜ, ɹ,  
 ʒ, ŋ and their distribution is shown in the following  
 table.

	i	e	a	u	o	ii	ee	aa	uu	oo
k	x						x	x		x
c	x							x		
j										
d								x		
t	x					x	x			
p	x									x
ph						x				
bh						x		x		
b			x			x		x		
n			x					x	x	x
m	x		x					x		
y										
r			x			x	x	x	x	x
l	x		x				x		x	
v							x			
ɜ		x				x		x	x	
ɹ							x	x	x	
ʒ							x			
ŋ			x		x				x	x



After vowels

/ m /	/petrooliyam/	'petrolyam'
	/aṣṣaam/	'place name'
	/room/	'place name'
	/ruum/	'room'
/ n /	/harijan/	'harijan'
	/dhavaam/	personal name
/ n /	/phoon/	'phone'
	/juun/	'june'
	/ṭan/	'ton'
	/riigal/	'rigal'
/ l /	/riiṭeel/	'retail'
	/dharmal/	'dharmal' (project)
	/phuul/	'flower'
	/kriminal/	'criminal'
	/anil/	personal name
	/ṣarkil/	'circle'
	/kḷab/	'club'
/ b /	/ṣkailaab/	'skailab'
/ k /	/denmaark/	place name
	/aṣook/	personal name
	/paḷaṭik/	'plastic'
	/paak/	'pakiṣtani'
/ c /	/ṣvic/	'switch'
/ j /	/naṭaraaj/	personal name
/ ṭ /	/advokeet/	'advocate'
	/aiiṭ/	'seat'
	/riṭ/	'rit'
	/vaiṭ/	'white'
/ d /	/rood/	'road'
	/deevīd/	personal name





/ d /	/iɾlaamabaad/	place name
	/naɟaamabad/	place name
/ /	/ aaph /	' of '
/ l /	/ɾarkil	'circle'
/ j /	/nataraaj/	'personal name'
/ ɾ /	/predeeɾ/	'region'
/ ɟ /	/naageeɟ/	personal name
/ ɾ /	/riliis/	'release'
/ p /	/pradiip/	' p. n '

SUMMARY OF CONSONANT DISTRIBUTION

6

Initial	Medial	Final
C V	VCV	VC
CVV	VVCV	VVC
	VCVV	
	VVCVV	



# CLUSTER PATTERN OF TELUGU

The present analysis of the cluster pattern is based on the news paper language.

There are clusters of as many as 4 consonants, initially and medially. But the occurrence of 4 consonant clusters are rare. Most of them are ext. loans. No identical consonant clusters occur word initially.

We have ample examples for word final consonant clusters; (even 3 consonant clusters). Most of them are English Loans Vowel clusters. The two vowel clusters are ai/ and /au/

## Initial 2 consonant clusters

### I. stop + r :

k	/kr/	/kriminal/	'criminal'
+g	/gr/	/greḡyaḡ/	'nobility'
t	/tr/	/triveendrum/	'Trivandrum'
d +r	/dr/	/druviikaranam/	'polariḡaḡam'
p	/pr/	/pradeeḡam/	'region'
ph	/phr/	/priḡc /	'French'
b	/br/	/bruhataaramaina/	'which is extended'
ḡ	/ḡr/	/ḡrii/	'Mr.'
ḡ	/ḡr/	/ḡreena/	'line'
v	/vr/	/vraaḡiḡa/	'that which has written'

### S + Stop

k	/sk/	/ḡkuulu/	'school'
t	/st/	/ḡtaartar/	'starter'
t	/st/	/ḡtiti/	'status'
S + ḡth	/ḡth/	/ḡtaapanam/	'foundation'
n	/ḡn/	/ḡneeham/	'friendship'
p	/ḡp/	/ḡpaḡtam/	'clear'
v	/ḡv/	/ḡvatantra/	'free'



I	k	+ l	/kl/	/kliṣṭangaa/	'with difficulties'
			/pl/	/plaaṣṭic/	'plastic'
			/by/	/bbyaaṅku/	'bank'
II	t	+ y	/ty/	/tyuutooriya/	'Tutorial'
			/vy	/vyakti/	'Individual'
			/jy/	/jyooti/	'personal name'
III	g	+ v	/gv/	/gvaaliyar/	'personal name'
			/ṣv/	/ṣvatantra/	'free'
			/dv/	/dviipa/	'personal name'

### Three consonant clusters

ṣ	t	+ r	/ṣṭrilaku/	'for women'
ṣ +	p		/ṣpring/	'spring'
d + r + v +			/drv/	/druviikaranana/
grh			/grh/	/grham/ plank'

### Medial 3 consonant cluster

Three consonant clusters are as follows:

	/kṣe/		/ekṣeenjii/		'exchange'
	/mbl/		/aṣembli/		'assembly'
n +	dr		/ndr/	/keendram/	'centre'
	dhr		/ndhr/	/aandhra/	'andhra'
	tr		/ntr/	/mantri/	'minister'
m +	khy	+	/nkhy/	/ṣaankhy/	'number'
	pr		/mpr/	/empreer/	'club'
	ṣṇ		/rṣṇ/	/aṣkarṣṇiiyam/	'attractive'
	ṣṭ		/ṣṭr/	/raaṣṭra/	'nation'
	ṣṭ		/ṣṭr/	/ṣaaṣṭra/	'science'
	kṣṭ		/kṣṭ/	/tekṣṭee/	'textile'



# MEDIAL 4 CONSONANT CLUSTER

In Telugu the voiceless voiced and the aspirated sounds are phonemic. Hence there may not <sup>be</sup> many 4 consonant clusters in <sup>^</sup>to the medial position.

eg. /<sup>ˆ</sup>adhyakṣam/ - dh - is a single phoneme

hence it is a 3 consonant cluster

/ṇakr/ /ṣaṇḥkritika/ - cultural

## MEDIAL 2 CONSONANT CLUSTERS

Two consonant cluster

I	II	III	IV	V
oral-oral	oral - nasal	nasal	nasal	nasal
(stop+stop)	(stop+nasal)	oral stop	nasal	semivowels
	a	b	c	d
oral+semivowel	semivowel+oral	Nasal+semivowel	semivowel+semi-vowel	

orals

semivowels

## MEDIAL TWO CONSONANT CLUSTER NASAL + STOP

-ṇk-	/ṇk/	/ṣaṇḥkaalam/	-evening
-ṇḡ-	/ṇḡ/	/aṇḡlikaaram/	-acceptance
-ṇkh-	/ṇkh/	/ṣaṇḥkhyam/	number
-ṇc-	/ṇc/	/aṇḥanaalu/	estimate
-ṇj-	/ṇj/	/aṇḥjali/	namaṣkaaram
-ṇṭ-	/ṇṭ/	/aṇṭu/	say -
-ṇḍ-	/ṇḍ/	/paṇḍu/	to be 'ripended





- nt -	/n t/	/anta/	'that much'
- nth -	/ nth /	/kaantharaavu/	'personal name'
- ndh -	/ ndh /	/bandham/	'relationship'
- mp -	/ mp /	/kampany/	'company'
- mbh -	/ mbh /	/stambhiñcu/	'astonished'
- mb -	/ mb /	/boombaayi/	'bombay'
- mh -	/ mh /	/simham/	'lion'
- nṭ -	/ nṭ /	/vaasiñtan/	'Washington'

	<u>Nasal + Nasal</u>	<u>Cluster</u>	<u>medial</u>
- nṇ -	/ nṇ /	/anna/	'anna-di-emke'
- nṇ -	/ nṇ /	/anni/	'having said'
- nṃ -	/ nṃ /	/sanmaaṇam/	'honour'
- mṃ -	/ mṃ /	/nammaḳkam/	'belief'

stop + stop

Identical consonant clusters

- kk -	/kk/	/ikkada/	'here'
- cc -	/ cc /	/paccal/	'green'
- tṭ -	/ tṭ /	/itṭivala/	'in this way'
- gg -	/ gg /	/daggara/	'near'
- tṭ -	/ tṭ /	/kotta/	'new'
- dḍ -	/ dḍ /	/pedda/	'big'
- dḍ -	/ dḍ /	/edda/	'place name'
- pp̣ -	/ pp̣ /	/ipp̣adu/	'now'
- bḅ -	/ bḅ /	/ebbandam/	'
- vṿ -	/ vṿ /	/ivvu/	'to give'
- lḷ -	/ lḷ /	/pilla/	'boy' child. (girl)
- lḷ -	/ lḷ /	/illu/	'house'

stop + nasal

j	+	n̄ / jñ̄ /	/vi jñaanam/	'knowledge'
t	+	m / tm̄ /	/aatma/	'self'
t	+	n / tn̄ /	/prayatnam/	'effort'



Semivowels and fricatives + nasal

- rn -	/ r̄n /	/aharn̄isu/	'day and night'
- rn̄ -	/ rn̄ /	/governor/	'governor'
- rm -	/ rm /	/nirmaanam/	'construction'
- ɾm -	/ ɾm /	/kaaɾmiiru/	'Kashmīra'
- ɾn̄ -	/ ɾn̄ /	/praɾnam/	'problem'
- ɾm̄ -	/ ɾm̄ /	/agaɾmaatuga/	'immediately'

[Nasal] + S. V. + Fricatives

- ny -	/ ny /	/punyaa/	'religious , obligation'
- nv -	/ nv- /	/anvastra/	'atomic'
- nɾ -	/ nɾ /	/penɾan/	'pension'
- nɾ -	/ nɾ /	/alavanɾ/	'allowance' 'allowance'
- my -	/ my /	/samyukta/	'united'
- mɾ -	/ mɾ /	/ahimɾa/	'nonviolence'

stop + stop

- kt -	/ kt /	/samyukta/	'united'
- k̄t -	/k̄t /	/vik̄tary/	'victory'
- d̄j -	/ d̄j /	/jad̄jii/	'judge'
- kc -	/ kc /	/pikcar/	'picture'
- pk -	/ pk /	/niruupkumsar/	'personal name'

stop + semivowels

k	/ ky /	/aikyata/	'unity'
kh	/khy/	/saak̄k̄ya/	'of number'
g + y	/ gy /	/aaroogyam/	'health'
j	/ jy /	/raajyam/	'nation'
t	/ ty /	/atyavasara/	'necessity'
dh	/dhy/	/adhyak̄a/	'president'
bh	/ bh /	/abhyarthana/	'request'
k	/ kr /	/kaaryakramam/	'program'
t + r	/ kr /	/saast̄ra /	'science'
d	/ d̄r /	/aard̄ar/	'order'
n	/ nr /	/oomprekaaṣ/	'personal name'



/ kɐ /	/ kɐ /	/ɛikɐana/	'education'
/ ɛt /	/ ɛt /	/adhiɐtaanam/	'foundation'
/ dɐ /	/ dɐ /	/landɐpiikar/	'laudspeaker'

Stop + semivowels and laterals

d	+ v	/ dv /	/advakeet/	'advocate'
t		/ tv /	/satvarakudu/	'quick'
t	+ l	/ tl /	/kootla/	'of crore'
b		/ bl /	/publik/	'public'

- lg -	/ lg /	/paalgona/	'
- rl -	/ rl /	/tairlu/	'tyre'

2 consonant cluster medials

flap + semivowels and fricatives

- ry -		Y	/ ry /	/kaaryakramam/	'pryogam'
- rv -	r +	v	/ rv /	/puurvam/	'east'
- r̃ɐ -		ɐ	/ r̃ɐ /	/prad̃ar̃ana/	'exhibition'

Stop + semivowel and laterals

- l +	y	/ ly /	/kalyaanootsavam/	'marriage'
	r	/ lr /	/	'
	l	/ ll /	/cellaaram/	'name'
	l̃	/ l̃l̃ /	/tooll̃a/	'great'
	v	/ lv /	/railvee/	'railway'

Fricative + semivowel

- ॐ +	y	/ ॐy /	/aavaṁyakaṭa/	'necessity'
	v	/ ॐv /	/aavaṁṭha/	'position'
	ṣ	/ ॐṣ /	/aavaṁṣam/	'Aaram'
- ॐr -	/ ॐr /	/ariṁṣama/		'effort'
- ॐc -	/ ॐc /	/paṁcama/		'west'



# Medical two consonant cluster

## flap + stop

- rk -	k	/ rk /	/varkṣoop/	'workshop'
- rg - r +	g	/ rg /	/vargam/	'group'
- rc -	c	/ rc /	/poorcugal	'place name'
- rj -	j	/ rj /	/antarjaatiya/	'international'
- rṭ -	ṭ	/ rṭ /	/cōrṭu/	'court'
- rd -	d	/ rd /	/urdu/	'language'
- rt -	t	/ rt /	/puurti/	'complete'
- rḍ -	ḍ	/ rḍ /	/aardar/	'order'
-rdh -	dh	/ dh /	/aardhika/	' <del>place name</del> ' of wealth
-rp-	p	/ rp /	/amiirpet/	'place name'

## Fricative and stop

	k	/ ɤk /	/puraɤkariñcu/	'considered'
	t	/ ɤt /	/poostal/	'postal'
	t	/ ɤt /	/praɤtutam/	'which was told'
s -	th		/ɤaṅkuɤthaapana/	'foundation'
ɤ -	ɤ		/paɤcima/	'western'
	p		/ɤnspektar/	'inspector'
- hn -			/madhyaahna/	'noon'

## Word final clusters

Normally there is no word final clusters, but due to the adaptation of technical words from English word final consonant clusters are found.

## Rules.I. nasal + stop

N =	ṅ	k	/ ṅk /	/byaaṅk/	'bank'
	ṇ	c	/ ṇc /	/phreṇc/	'French'
	ṁ	j	/ ṁj /	/gaṁj/	'pl, name'
	n	ṭ	/ nṭ /	/dipaartment/	'department'
		d	/ nd /	/band/	'bend'
Nasal + s			/ ns /	/advaans/	'advance'





## II. Stop + stop

k + t	/ kṭ /	/praaj <sup>ə</sup> kṭ/	'project'
p + t	/ pṭ /	/liɣipṭ/	'Egypt'

## III. Fricative laterals + stop

l	+k	/ lk /	/ɕilk/	'silk'
r		/ rḳ /	/wark/	'work'
ɕ	+ṭ	/ ɕṭ /	/poɕṭ/	'post'
r		/ rṭ /	/koorṭ/	'court'
l	+k	/ lk /	/ɕilk/	'silk'
r		/ rḳ /	/work/	'work'

Most of the word final consonant clusters are English loan words. 3 consonant clusters - word finally, rare occurrence of 3 consonant clusters in the word final position is seen, in English loan words.

/ rṭ /	/a <sup>ə</sup> rṭ/
/ nṭ /	/implemenṭ/
/ iṃ /	/filṃ/
/ ŋ̣ /	/ɕarṭiŋ̣/

Analysis is liable to modification.

The two vowel clusters ai, and au are contrast.

/ɕaiṭ/	'sight'
/ɕaukariyam/	'convenience'

### distribution

### medial

initial	ai	/khaidi/	'prisoner'
/aidu/ ५ 'five'		/ɕaiṭ/	'sight'
/aidava/ 'of ५ five'		/praiveiṭ/	'private'
		/paina/	'one, upon'
		/phainancial/	'financial'
/autaa <sup>u</sup> du/ 'he became'		/d <sup>ə</sup> ɕreeḳtar/	'director'
/na <sup>u</sup> nka/ 'ship'		/ɕallaab/	'sky'
/naukaadal/ 'navy'		/vaikom/	'place name'



### GENERAL STATEMENT

A detailed analysis of the available clusters, in the random sample of 500 words, shows the following findings.

1. Among the two vowel clusters, / ai / and / au / never occur finally in the corpus.

2. The most frequent cluster pattern is N + C, clusters, i.e., (Nasal + stops and N + F, N + S.V.) their total frequency is 78.

(a) Next, those clusters, having / r / as the first member of the cluster, frequency - 66.

(b) Identical consonant clusters, having a frequency, 63, excluding the N + N, clusters frequency - 19.

(c) If we classify clusters, on the basis of the phoneme, which occur as the I<sup>nd</sup> member of the cluster, there also, we have most frequent clusters, having / r / as the II<sup>nd</sup> member.

### CLUSTER PATTERNS

A preliminary calculation of clusters out of 500 words has been done and their frequency is also noted.

The words are selected on a random sampling i.e., 50 items from each phoneme. The phonemes which have less items, the whole of the items are taken.

In this analysis much attention is given to the medial clusters.

### CLASSIFICATION OF CLUSTERS (MEDIAL)

A simple classification is adopted, assuming, it will help in comparison of the clusters with the other languages.

1. Identical clusters including nasal.

2. Nasal + stop clusters.

3. Clusters. with r, l, and s, (or r, l, s, as the first member of the clusters.)



4. Other clusters which did not belong to these categories are classified together.

## FINDINGS

A close analysis of the 500 words, given the following findings.

1. The vowel / a / has more frequent occurrence.
2. No native word had a cluster ending.
3. Most of the word final clusters, even (3) consonant clusters) are of Loan words from English.
4. In the medial position Telugu language has 4 consonant cluster. eg. / nɛkr / 'sanskritika'
5. Long vowels / aa, ii, ee / occur in the final position, but the frequency is very less.

## NOTES ON VOWEL CLUSTERS / 500

The two vowel clusters, ai, and au are noted. The cluster / ai / occurs initially medially and finally, no final occurrence of / au / is found in the limited corpus.

	<u>Initial freq.</u>	<u>medial</u>	<u>final</u>
/ ai /	3	5 + 3	3 / 11
/ au /	2	4 + 1	- / 6

Total frequency vowel clusters : 19

Total number of 3 consonant clusters in the medial position 10, having a frequency - 15.

Word final consonant clusters are also noted.

## 2. Consonant cluster.

/ ŋg /	-	3
/ nɛ /	-	4
/ pt /	-	1
/ st /	-	1

k as II nd member - 4









# Initial clusters

/ ʔr /	- 3	x	(c)	p +	$\begin{pmatrix} r \\ l \end{pmatrix}$	-	/ pr /
/ ʔth /	2		(				/ pl /
/ ʔk /	2		(d)		$\begin{pmatrix} t \\ t \\ th \\ k \\ p \end{pmatrix}$		/ ʔt /
/ ʔp /	2			ʔ +			/ ʔt /
							/ ʔth /
							/ ʔk /
/ pr /	20						/ ʔp /
/ pl /	1		(c)	$\begin{pmatrix} k \\ p \end{pmatrix}$	$\begin{pmatrix} p \\ l \end{pmatrix}$		/ kr /
							/ kl /
							/ pr /
							/ pl /

## Initial clusters / 500

/ k /	as the first member of the cluster	3
/ p /	..	21
/ ʔ /	..	13
/ r /	as the second member of the clusters.	26
Total frequency initial clusters	:	36

- II. 1. 8 types of 3 consonant clusters in the initial position.  
 2. Word final 3 consonant clusters : 2

- III. 2 types of 4 consonant clusters in the initial position  
 are noted.  
 word medial 4 consonant cluster is also seen.



# MEDIAL CLUSTERS

## I. Identical consonant clusters :

a. <u>Stops</u>	occurrence	b. <u>Nasals</u>	occur
/ kk /	12	/ mm /	9
/ cc /	5	/ nn /	9
/ tt /	10	/ /	
/ tt /	8	/ nn /	1
/ gg /	2		
/ jj /	2		
/ dd /	5		
/ dd /	2		
/ pp /	7		
/ bb /	2		
/ vv /	1		
/ ll /	5		
/ ll /	2		
<del>ttt</del> -----	-----		
13	63		
=====	=====		

A. most frequent cluster (identical) <sup>are</sup> / kk, cc, tt, & pp. /  
 b. / nn / and / mm /.

		Nasal + stop	
N +	k	/ nk /	5
	g	/ ng /	3
	c	/ nc /	7
	j	/ nj /	2
	t	/ nt /	9
	t	/ nt /	5
	d	/ nd /	10
	d	/ nd /	3
	p	/ mp /	6
	t	/ nt /	1



<del>ph</del>	/ mph /	1
<del>b</del>	/ mb /	6
<del>bh</del>	/mbh <del>h</del>	1

### Exception

$\bar{n} + \bar{j}$	/ nj /	1
m + d	/ md /	1

### Stop + nasal

m +	<del>j</del>	+n	/ j + n /	2
	<del>g</del>		/ gn /	1
	<del>s</del>		/ ms /	1
	<del>h</del>		/ mh /	2
n / +	<del>s</del>		/ ṇs /	1
	<del>y</del>		/ ṇy /	
	<del>v</del>		/ ṇv /	2

I and III can be combined.

m + s	/ ms /
m + h	/ mh /
	/ ns /
	/ nh /

Exception / n + y / - / ny /

C1 C2

r +	<del>k</del>	/ rk /	3
	<del>g</del>	/ rg /	1
	<del>c</del>	/ rc /	2
	<del>j</del>	/ rj /	2
	<del>n</del>	/ rn /	1
	<del>t</del>	/ rṭ /	2
	<del>t</del>	/ rt /	5
	<del>d</del>	/ rḍ /	1



r +	d	/ rd /	1
	th	/ rth /	5
	dh	/ rdh /	2
	n	/ rn /	5
	p	/ rp /	3
	ph	/ rph /	-
	b	/ rb /	2
	bh	/ rbh /	4
	m	/ rm /	1
	y	/ ry /	4
	l	/ rl /	7
	v	/ rv /	2
	ā	/ rā /	6
	ā̇	/ rā̇ /	2
	ā̇)	/ rā̇ /	3
s +	k	/ sk /	5
	c	/ sc /	2
	t	/ st /	7
	d	/ sd /	3
	t	/ st /	3
	n	/ sn /	2
	p	/ sp /	3
	m	/ sm /	2
	y	/ sy /	2
	l	/ sl /	3
s +	v	/ sv /	5
	r	/ sr /	1
	/ ār /		1
	/ ān /		2
	/ st /		9
	/ pt /		1





1 +

/ tp /		1
/ kc /		
/ pk /		1
/ kt /		1
/ kt <sub>a</sub> /		1
<del>k</del>	/ lk /	1
<del>g</del>	/ lg /	2
<del>j</del>	/ lj /	1
<del>d</del>	/ ld /	2
<del>n</del>	/ ln /	1
<del>p</del>	/ lp /	3
<del>m</del>	/ lm /	1
<del>a</del>	/ la /	1
<del>y</del>	/ ly /	1

# Other type of clusters

<del>k</del>	+ r	/ kr /	12
<del>g</del>		/ gr /	10
<del>t</del>		/ tr /	8
<del>p</del>		/ pr /	5
<del>ky</del>		/ ky /	1
<del>gy</del>		/ gy /	1
<del>j</del>		/ jy /	2
<del>t</del>	+ y	/ ty /	7
<del>d</del>		/ dy /	1
<del>p</del>		/ py /	1
<del>bh</del>		/ bhy /	1
<del>k</del>		/ kl /	1
<del>p</del>	+ l	/ pl /	2
<del>t</del>		/ tl /	2
<del>t</del>		/ tv /	4
<del>d</del>	+ v	/ dv /	2



k	+	$\begin{array}{ c } \hline t \\ \hline \end{array}$	+ a	/ ṭa /	2
		$\begin{array}{ c } \hline t \\ \hline \end{array}$		/ ṭa /	1
		$\begin{array}{ c } \hline ʈ \\ \hline \end{array}$		/ ḳa /	9
		$\begin{array}{ c } \hline ʈ \\ \hline \end{array}$		/ ḳa /	7

30 clusters

word initial

/ ḷma /

/ filṃa /

/ ṛṭa /

/ aarṭa /

word initial

/ dṛv /

/ dṛviikaraṇa /

/ ʌpṛ /

/ ʌpṛiṅ /

/ ʌtṛ /

/ ʌtri /

word medial

/ ṃbl /

/ aʌmbli /

1

/ ṃpr /

/ eṃpṛer /

1

/ ṇdy /

/ pạndya /

1

/ ṇ̇r /

n	+	/ t /	/ ṇr /	/ mantri /	4
		/ d / + r	/ ndṛ /	/ koendra /	3
		/ dh /	/ ndhṛ /	/ aandhra	
			/ ḍp /	/ lauḍpiikar /	
			/ ṛa /		
			/ ṛa /	/ kaṛṃom /	

#### 4 consonant clusters

Initial

Medial

/ ṇkṛ /      / ʌṇskrṭiika /



GENERAL STATEMENT  
XXXXXXXXXXXXXXXXXXXXXX

An analysis of the syllabic pattern of Telugu, based on the news paper language is given.

Findings : a) 15 types of mono syllabic structure

Initial syllable - 17 - types

Final syllable - 6 - types

Telugu has a maximum number of mono syllabic, syllabic-types. The results may be liable to modification.

SYLLABLE STRUCTURE OF TELUGU

Syllable is the constituent of a word. A phonological word is composed of one or more syllables between word junctures.

A normal syllable consist of an onset and a nucleus and a coda. Nucleus occurs independently with out an onset and or coda. Onset and coda are dependent.

The structure of a syllable therefore can be represented as follows : X O X N X C O ± (N) ± C .

Onset is any one of the consonants which will begin a word. Onset consists of a single consonant or a cluster of two or three consonants. Onset is found always in the word initial position.

/ kadha / 'story' CVC - V

/ 'rii / 'Mr.' CCVV

Nucleus is any one of the vowels. Complex nucleus consists of identical or nonidentical clusters of two vowels. /A supra complex nucleus consists of three vowels. It occurs only in the initial or final position of a word and is less frequent /



# SYLLABLE PATTERN

A phonological word again may be classified as monosyllabic and poly syllabic. The structure of the monosyllabic word has the following patterns.

V	/ a /	'that'
VV	/ aa /	'that (dams)
VVC	/ eem /	'why'
CVV	/ raa /	'come'
CCV	/ tri /	'three'
CCVV	/ rrii /	'Mr.'
CVC	/ kat /	'to cut'
CVVC	<del>/ -cvvc-(N) /</del>	
	/ Ciiru /	'to tear'

The syllable in a phonological word can be divided as normal and extended. A normal syllable consists of an onset and a nucleus and a coda.

eg.    ON+C            <sup>e</sup>ey - do.            CVC  
           C-E-Y-

Syllable division is made between the coda of the type, C, CC, or CCC of the initial syllable and V, VV of the following syllable.

/ stri/	CCCV.
/spring/	CCCVCC
/aarts/	VVCCC

~~In a consonant cluster the first consonant constitutes the coda of the preceding syllable and the second consonant constitutes the onset of the next syllable.~~

The number of syllables in a citation form ranges from one to five.





### EXTENDED SYLLABLE

Any syllable following the initial syllable is an extended syllable. The extended syllable consists of a nucleus with or without coda. It always follows the normal syllable.

eg.	/ haami /	'harm'	CVVC + V
	/ himsa /	'hurt'	CVCC - VV

### CLOSED AND OPEN SYLLABLE

When a syllable ends in vowel then it is called open syllable and if it ends in a consonant it is then called closed syllable. This identification depends up on the nature of the final phoneme of the word.

Words are classified according to the number of syllables they contain.

### FINAL SYLLABLE

Finally syllable ends in V or VV or C, normally on consonant cluster ends a word, but, due to the adaptation of loan words, from skt. and English, now, we have occurrence of consonant cluster ending word.

eg.	/poost/	post
	/dipaartment/	department

Consonants which will not occur before a word juncture will not form the coda of the monosyllabic word or the coda of the final syllable of a poly syllabic word.

### POLY SYLLABIC WORD

Any word having more than one syllable is under poly-syllabic words. It may be di-syllable, tri-syllable, or tetra syllable, etc.



DISYLLABIC

		<u>Pattern</u>
/ niiroo/	Person <sup>1</sup> name	/ CCVV - VV /
/ nelāa /	floor	/ CVC - V /

THE TRISYLLABIC

/ patr / ik / aa /	letter	/ CVCC - VC - VV /
/ amāya /	problem	/ CVC - VCC - V /

MONOSYLLABLE

The syllabic pattern of the monosyllabic <sup>words</sup> based on the newspaper language is given below.

MONOSYLLABLE

/ v /	/ a /	that
/ vv /	/ ii /	'this'
/ CVV/	/ doo /	'two'
/ CCVV/	/ arii/	'Mr.'
/ VVC /	/ eem /	'why'
/ CCCVV/	/ atri/	'woman'
/ CVCV/	/ rood/	'road'
/ VVCC /	/ aart/	'aarts'
/ CVC /	/ kat/	'cut'
/ CCCVCC/	/ spring/	'spring'
/ CVCC /	/ philm/	'film'
/ CCVVCC /	/ byaank/	'bank'
/ CVCVCC /	/ poet/	'post'

TYPES

/ v /	
/ vv /	
/ VC /	
/ VVC /	
/ CVV /	
/CVC	III CVC
/CVC	CVC
/ CCVV/	/VVCC/



# INITIAL SYLLABLE

Initial syllable has the following structure.

I.	VC	/aṣook/	'personal name'
	VCC	/ant-aa/	'that much'
	VCCC	/inṣpektar/	'inspector'
	VVC	/aak-ali/	'hunger'
	VVCC	/aakḍ-ar/	'order'
	VVCCC	/aandhr-a/	'Andhra'
II.	CVC	/kar-avu/	'difficult' <i>'famine'</i>
	CVCC	/ṣant-oo-ṣ-am/	'happy'
	CVCCC	/tekṣṭ-ailṣ/	'textiles'
	CVVC	/niiroo/	PN
	CVVCC	/tiivr-am/	'forcely'
	CVVCCC	/raaṣṭram/	'nation'
III.	CCVC	/krim-in-al/	'criminal'
	CCVCC	/krind-a/	'below'
	CCVVC	/graam-a/	'country'
	CCVVCC	/ṣṭaart-ar/	'starter'
	CCVVC		
	CCCVVC	/drviik-arana/	

## FINAL SYLLABLE

The pattern of the final syllable is as follows

V

VC	/editar/	editor
VCCC		
VCC	/proojakt/	'project'
VV	/niirṣoo/	personal name
VVC	/nataraaj/	personal name
VVCC		



PERCENTAGE OF LOANS

	skt	Tch.	English	Proper No. PL/PN.	u/H
vowels	184	2284	29	32	2
Consonants	1001	1038	194	168	18
Total.	1185	<sup>1322</sup> <del>1266</del>	223	200	17
V=475      G.T. <u>2903</u> Con: <u>2428</u>					

vowels	38.6%	<del>49.6%</del>	5.1%	6.6%	
Conson.	40.8%	<del>40.9%</del>	8.0%	7.4%	
Total.	<u>47.5%</u>	<del>45.6%</del>	8.0%	6.8%	.58%

No. of Loan words.

letter	Telugu	skt.	English	Proper noun pl. PN.	u/H
a/aa	99	122	11	21	
i/ii	31	12	5	2	
u/uu	21	33	1	4	2
c/cc	46	12	6	2	
ai	3	1			
o/oo	25	5	5	3	
au	3.				
	228	184	29	32	2

Grand Total.      475.





letter	skt.	Telu.	English.	Proper No. pl / PN	Total	u/H
ka	44	167	33	22	267	
ga	12	49	2	15	78	
ca	12	96	1	5	115	
ja	27	30	6	11	74	
t			14		14	
d			11		11	
ta	14	105	1	3	123	
da	44	51	1	6	101	-1
ua	59	32	1	7	140	-4
pa	229	126	45	10	415	
ba	44	25	11	12	89	-1
na	49	111	10	11	181	
ya	22	10	3	1	35	
ra	28	30	18	16	95	
la	10	19	1	5	35	
va	95	155	15	14	290	
ṣa	38			9	47	
ṣ	254	24	22	14	5	-5
ṣ.			3		3	
ha	11	8	2	6	28	-2
	1001	1038	194	168	2903	15
Grand Total		2428			2428	



TELUGU ANDHRA BHUMI : 22-6-1973.

	items	occurrences	page. 8.
Vowels	475	957	
ka series	267	536	
ga	78	128	
ca	115	255	
ja	74	110	
t	14	23	No.1 occurrence. <u>5663</u>
d	11	30	No. of claims. 2903
ta	123	219	
da	101	148	each word has an average
na	110	201	
pa	415	623	occurrence of 2 =====
ba	89	123	
ma	181	336	
ya	35	46	
ra	95	198	
la	35	73	
va	290	439	
sa	47	175	
sa	3	3	
sa	310	638	
he	28	42	
Total.	2903 =====	5663 =====	

